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MULTIGROUP RESONANCE-REGION CROSS SECTIONS FOR TUNGSTEN AND DEPLETED URANIUM FOR USE IN SHIELDING CALCULATIONS

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16. Abstract

Multigroup capture and scatter cross sections in the resolved resonance region were calculated for tungsten and depleted uranium slabs for use in shielding calculations of neutron transport and capture distributions. Slabs of thickness of 1 to 8 centimeters surrounded by hydrogen or lithium hydride were considered. GAROL was used to generate the cross sections, a method previously observed to preserve the total capture rate in a detailed multigroup neutron transport calculation for a thick resonance absorber. Average cross sections were calculated for a 32-energy-group split (0.4 to 1234 eV) compatible with that used by GAM-II. Group fluxes are also presented permitting further group collapsing either by hand calculations or with an included computer program.

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SUMMARY

Multigroup capture and scatter cross sections for the resolved resonance region were calculated for tungsten and depleted uranium slabs. The computer code used to generate the cross sections, GAROL, was previously observed to preserve the total capture rate in detailed multigroup neutron transport calculations. The cross sections are intended for use in shielding calculations of neutron transport and capture distribution in slabs or cylindrical or spherical shells of thick resonance absorbers.

Capture and scatter cross sections were obtained for fully dense tungsten and depleted uranium slabs of thickness 1, 2, 2.54, 4, and 8 centimeters; the slabs were surrounded by either hydrogen or lithium hydride. Group cross sections were calculated for a group split of 0.25 lethargy units extending from 0.414 to 1234.1 eV. This group split is identical to that of the last 32 groups in the GAM-II 99-group split; thus, the presently reported group cross section sets may be readily merged with 1 keV to 15 MeV cross-section data of GAM-II. Because it may not be generally convenient to run with 32 energy groups in the 1 eV to 1 keV region, the group fluxes which were calculated with GAROL are also presented; further group collapsing either by hand calculations or with an included computer code is thus permitted.

INTRODUCTION

A man-rated shield for a compact reactor is generally composed of alternate layers of hydrogenous, lightweight neutron shielding material and high-atomic-number, heavyweight gamma shielding material. Because the gamma shielding material absorbs neutrons and produces capture gammas, a calculation of the spatial distribution of the neutron capture rate is necessary to determine the dose from these capture gammas. Optimum placement of the gamma shielding layers, relative to the neutron shielding

layers, to yield minimum shield weight for specified dose constraints is dependent on accurate calculation of these secondary sources.

A large fraction of neutron captures in the gamma shield material originates in the resolved resonance region, extending from about 1 eV to 1 keV. In this region, the cross section is characterized by very high but narrow resonances. The methods of reducing the rapidly varying cross sections to a broad multigroup structure for use in subsequent transport calculations in a thick resonance absorber are discussed in references 1 and 2. The conclusions of that study were, first, that when the group cross section generated by the code GAROL (ref. 3) is used in a subsequent neutron transport calculation within an absorber lump, the total neutron capture rate in the absorber was preserved.

Second, because the GAROL calculation retains the region-averaged flux, it obviates a separate transport calculation to obtain information required to flux-weight group-averaged cross sections.

Because libraries of updated input data (i.e., resonance parameters and optimum energy point distributions) are required for GAROL and the code is not widely used, it is more of a research tool than a design tool at present. Also GAROL, as presently distributed (ref. 4), is written in FORTRAN II and FAP for the IBM 7040 computer and, because of this, its use is further limited. For these reasons, this report presents group-average capture and scatter cross sections calculated with GAROL for tungsten and depleted uranium for use in shielding studies. Group cross sections were calculated for slabs of tungsten and depleted uranium ranging from 1 to 8 centimeters in thickness; the slabs were surrounded by a hydrogen or lithium hydride moderator. Group scatter and capture cross sections were obtained for the energy interval 0.414 eV to 1.234 keV in 32 equal lethargy intervals of width 0.25. This group split is identical to that of GAM-II (ref. 5) in this energy interval and permits the presently reported values to be used with GAM-II high-energy cross sections. Region-averaged group fluxes in the absorber region are also reported that permit further energy group collapsing, either by hand or with the computer code included to print and process the GAROL generated data.

METHOD OF ANALYSIS

The GAROL code, used to generate the group-average cross sections, requires a table of cross sections against energy as input. To ensure accuracy in the representation of the rapidly varying neutron cross section and a reasonable GAROL computation time, a set of energy points was generated with the use of EPIGRAM (ref. 6) such that the maximum error in the cross section obtained by linear interpolation between the

values calculated from resonance parameters at selected energy points is the lesser of 5 barns or 2 percent. (The tungsten resonance parameters used are listed in ref. 6. The parameters for the uranium-238 resonances are the recommended values of ref. 7. The uranium-235 resonance parameters are taken from ref. 8 supplemented by 22 resonances below 50 eV from ref. 7.) This optimum set of about 3000 energy points, which will be different for each material considered, and the resonance parameters and a material temperature are input to GAROL to generate a cross-section tape for future use. This tape contains point values of Doppler-broadened infinitely dilute total, scatter, capture, and fission cross sections calculated from the resonance parameters for each of the energy points. GAROL calculations were then performed for various absorber thicknesses in various moderators using the prepared cross-section tape. Output from the GAROL code includes the average flux in the absorber and average capture, scatter, and fission cross sections for any desired multigroup energy split. Group-average cross sections are obtained by GAROL for each region from equation (1):

$$\overline{\sigma} = \frac{\int \overline{\varphi}(E)\sigma(E)dE}{\int \overline{\varphi}(E)dE} \tag{1}$$

where the $\overline{\varphi}(E)$ are the region-averaged fluxes calculated by GAROL at each energy point, $\sigma(E)$ is the appropriate cross section at each energy point, and the integrals are performed over the multigroup energy interval of interest.

RESULTS AND DISCUSSION

With the use of the method described in the previous section, group fluxes and scatter, capture, and fission cross sections were obtained for fully dense natural tungsten and depleted uranium (0.23 percent uranium-235) with either hydrogen or natural lithium hydride as an external moderator. Atom densities used are as follows:

Isotope	Atom density, atoms/cm^3
Tungsten:	
W^{180}	0.0000885×10^{24}
W^{182}	.01670
W^{183}	.00910
W^{184}	.01935
W^{186}	.01794
Depleted uranium:	
U^{235}	0.000109×10^{24}
U^{238}	.0472

Calculations were made for tungsten and depleted uranium slab thicknesses of 1, 2, 2.54, 4, and 8 centimeters. Moderator thickness was taken to be 60 centimeters (essentially infinite) in all cases. GAROL calculations were performed with approximately 2900 energy points in each case. Microscopic group cross sections and fluxes were obtained for the energy interval of 0.414 to 1234.1 eV in 32 groups of width of 0.25 lethargy units.

Table I lists the lower-limit energy boundary for each group in eV along with integrated group fluxes and microscopic cross sections, in barns, for natural tungsten calculated for the case of tungsten in hydrogen. (A complete listing of microscopic cross section by isotope appears in the appendix.) The relative flux (table I(a)) shows a strong dependence on absorber thickness. Figure 1, a histogram of the group fluxes for the 1- and the 4-centimeter-thick cases, illustrates this point. On the other hand, the capture and scatter cross sections (tables I(b) and (c), respectively) on this 0.25 lethargy unit group split show less than 50 percent variation with sample size for the range of thicknesses considered.

Table II lists group fluxes and microscopic cross sections in barns calculated for the case of tungsten in lithium hydride. Again the strong dependence of group flux (table II(a)) on sample size is observed. In addition, comparing table II(a) with table I(a) reveals the effect of using lithium hydride as a moderator. Figure 2 is a histogram of relative group flux in the 4-centimeter slab of tungsten with hydrogen or lithium hydride as moderator. Here the effect of lithium-6 (Li^6) absorptions to deplete the low energy flux is clearly shown. The group capture and scatter cross sections (tables II(b) and (c), respectively) show a maximum of 50 percent variation with sample size. A comparison of group cross sections calculated with hydrogen moderator with those calculated with lithium hydride moderator (tables I(b) and II(b)) reveals only a few percent difference, a consequence of the moderator flux depletion due to the large Li^6 (n, α) cross section

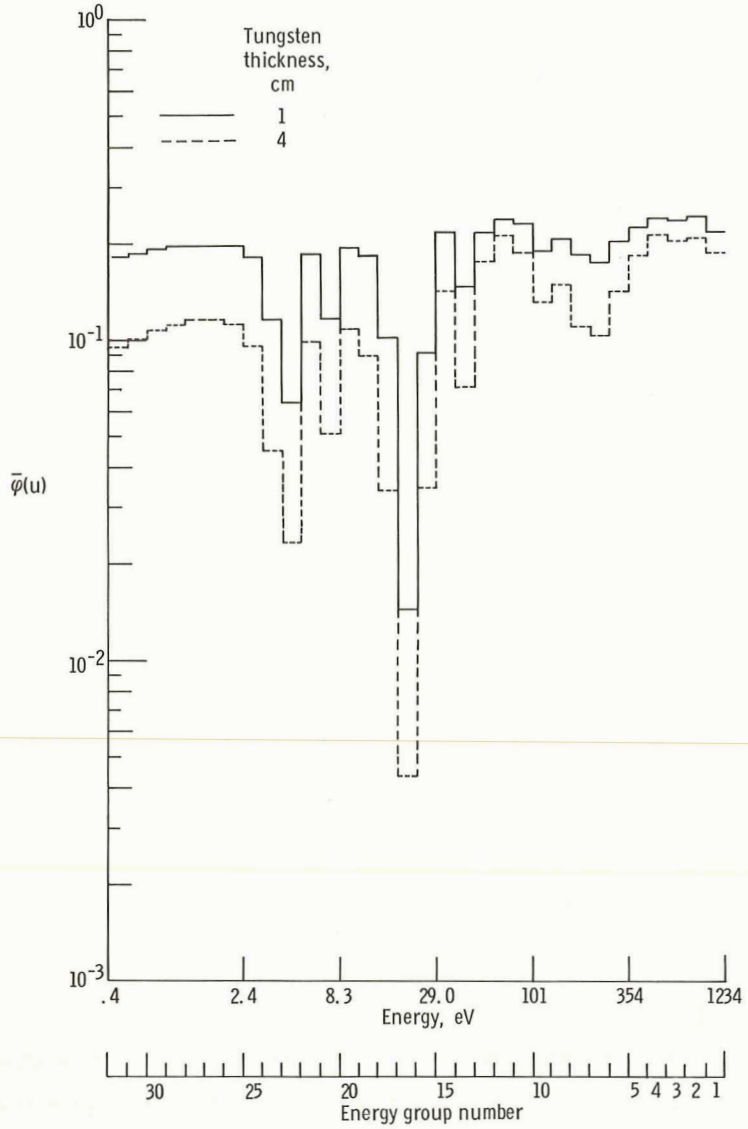

Figure 1. - Relative multigroup fluxes in tungsten slab surrounded by hydrogen.

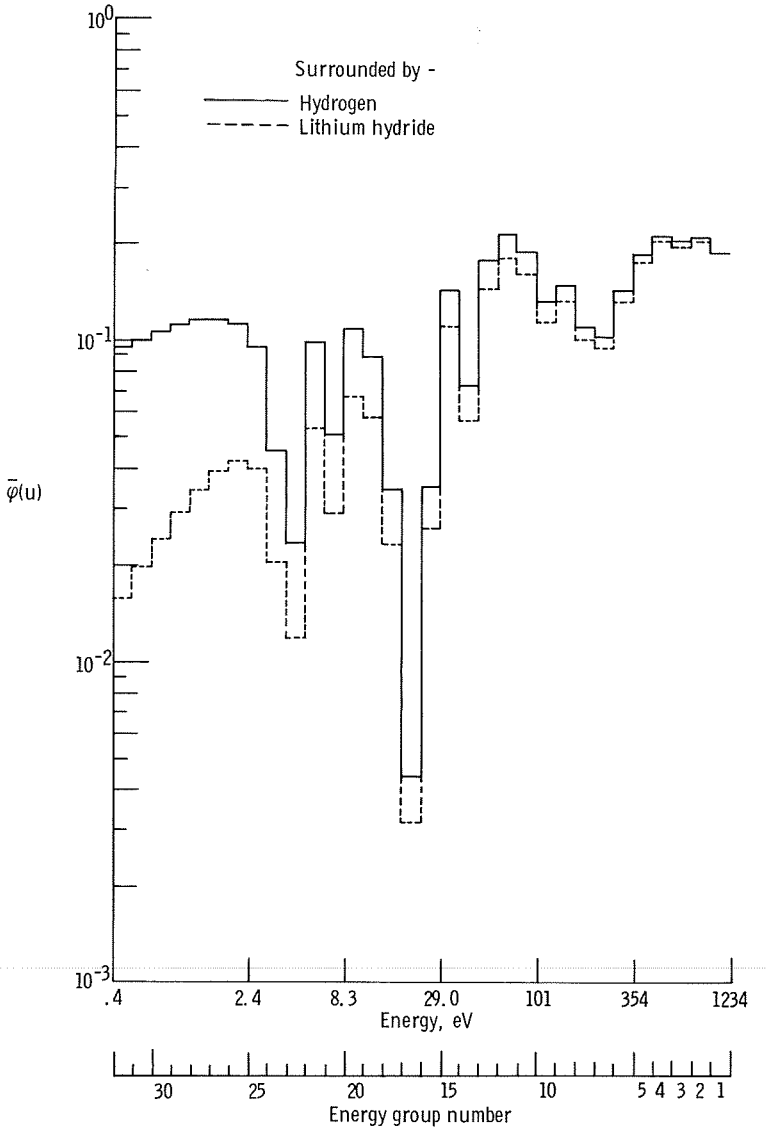

Figure 2. - Relative multigroup fluxes in 4 centimeter slab of tungsten.

which is proportional to 1/v.

Tables III and IV list group fluxes and cross sections in barns calculated for depleted uranium slabs in hydrogen and lithium hydride, respectively. The results are qualitatively similar to those obtained for tungsten; however, the maximum variation in respective group cross sections is a factor of 2 for the range of thicknesses considered.

USE OF CALCULATED CROSS SECTIONS

The 32 group, 0.4 to 1234 eV, capture and scatter cross sections presented in the

previous section may be used as is for multigroup neutron transport calculations for the tabulated thicknesses of resonance absorber slabs (or cylindrical or spherical shells of the same thickness). They must, of course, be merged with a high energy (1 keV to 15 MeV) cross section set as calculated by GAM-II, for example. If the slab is not of the thickness listed, interpolated values may be used. Extrapolation, especially to thinner absorbers, because of the rapidly rising average cross sections, is not advised. On the basis of conclusions reported in references 1 and 2, total capture rates in the absorber should be preserved when these cross sections are used.

It is often inconvenient to perform a neutron transport calculation with the 32 energy groups in the 0.4 to 1234 eV region. For this reason, the relative group fluxes which were calculated by GAROL are also listed in the report (tables I(a), II(a), III(a), and IV(a)) to permit group collapsing according to the following equation:

$$\overline{\sigma} = \frac{\sum \overline{\varphi}_i \sigma_i}{\sum \overline{\varphi}_i}$$

where i refers to energy group, and the summations are taken over the desired groups. This group collapsing may be done by hand calculations or with the computer code included in the appendix of this report.

CONCLUDING REMARKS

Multigroup capture and scatter cross sections in the resolved-resonance energy region were calculated for tungsten and depleted uranium slabs for use in multigroup shielding calculations of neutron transport and capture rate in thick resonance absorber slabs. Methods used to generate the cross sections were those previously verified to preserve the total neutron capture rate in a large absorber lump. The cross-section data were generated by the GAROL code. Average group capture and scatter cross sections were obtained for fully dense tungsten and depleted uranium slabs of thickness of 1, 2, 2.54, 4, and 8 centimeters; the slabs were surrounded by either hydrogen or lithium hydride. Group cross sections were calculated for a group split of 0.25 lethargy units extending from 0.414 to 1234.1 eV. This group split is identical to that of the last 32 groups in the GAM-II 99-group split; thus, the presently reported cross section set may be readily merged with the 1 keV to 15 MeV cross section data of GAM-II to obtain a complete cross-section set extending from 0.4 eV and 15 MeV.

The respective group cross sections for the different slab thicknesses show differences of up to 50 percent in tungsten and a factor of 2 in depleted uranium. Interpolation

of cross sections for intermediate thicknesses is justifiable and advisable. The group cross sections calculated for hydrogen moderator and lithium hydride moderator were different, for the respective slab thicknesses, by only a few percent.

Because it may not be generally convenient to run a transport calculation with 32 energy groups in the 1 eV to 1 keV region, the relative group fluxes, which were calculated and show a strong dependence on absorber size and choice of moderator, are also presented; this permits further energy group collapsing either by hand calculations or with an included computer code.

Lewis Research Center,
National Aeronautics and Space Administration,
Cleveland, Ohio, August 19, 1969,
124-09.

APPENDIX - A COMPUTER CODE TO READ AND MANIPULATE GAROL PUNCHED OUTPUT

Presented here is a small computer code to read multigroup region-averaged fluxes, capture cross sections, and scatter cross sections calculated and punched out by GAROL. Data are for a group split of 0.25 lethargy units and extend from 0.414 to 1234.1 eV. Cross sections are included for each isotope and each slab thickness. All cross sections are microscopic and in units of barns. Energies listed are the lower energy boundaries of each group in units of eV.

Separate codes are included for the tungsten and uranium cases. The codes, when executed, will print out not only the information presented in this report but also a breakdown of cross section by individual isotope. The final section of each code outlines a procedure for further group-collapsing the cross sections.

The first code manipulates isotopic tungsten cross sections. Tungsten is fully dense and isotope fractions are those occurring naturally. The code listing and output are given in table V.

The second code manipulates cross sections of uranium-238 and uranium-235 as calculated for fully dense depleted uranium (0.23 pct uranium-235). The code listing and output are given in table VI.

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TABLE I. - MULTIGROUP FLUXES AND CROSS SECTIONS FOR SLABS

OF NATURAL TUNGSTEN SURROUNDED BY HYDROGEN

(a) Fluxes

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup fluxes				
1	9.6112E 02	2.1656E-01	2.0255E-01	1.9700E-01	1.8512E-01	1.6272E-01
2	7.4852E 02	2.3908E-01	2.2471E-01	2.1841E-01	2.0475E-01	1.7968E-01
3	5.8295E 02	2.3263E-01	2.2033E-01	2.1454E-01	2.0020E-01	1.6784E-01
4	4.5400E 02	2.3792E-01	2.2786E-01	2.2231E-01	2.0985E-01	1.7965E-01
5	3.5358E 02	2.2134E-01	2.0525E-01	1.9803E-01	1.8158E-01	1.4978E-01
6	2.7536E 02	2.0036E-01	1.7504E-01	1.6402E-01	1.4005E-01	9.9950E-02
7	2.1445E 02	1.7297E-01	1.4038E-01	1.2733E-01	1.0144E-01	6.5059E-02
8	1.6702E 02	1.8390E-01	1.4982E-01	1.3632E-01	1.0942E-01	7.0545E-02
9	1.3007E 02	2.0609E-01	1.8259E-01	1.7195E-01	1.4775E-01	1.0407E-01
10	1.0130E 02	1.8744E-01	1.6277E-01	1.5237E-01	1.2985E-01	9.1644E-02
11	7.8893E 01	2.2959E-01	2.1397E-01	2.0613E-01	1.8665E-01	1.4528E-01
12	6.1442E 01	2.3640E-01	2.2715E-01	2.2265E-01	2.1144E-01	1.8423E-01
13	4.7851E 01	2.1473E-01	1.9926E-01	1.9214E-01	1.7533E-01	1.4200E-01
14	3.7266E 01	1.4581E-01	1.0870E-01	9.5122E-02	7.0652E-02	4.1260E-02
15	2.9023E 01	2.1507E-01	1.8630E-01	1.7271E-01	1.4280E-01	9.5041E-02
16	2.2603E 01	9.0212E-02	5.7404E-02	4.8472E-02	3.4637E-02	1.9943E-02
17	1.7603E 01	1.4626E-02	8.1523E-03	6.9897E-03	4.3453E-03	2.2504E-03
18	1.3710E 01	1.0140E-01	6.1223E-02	5.0354E-02	3.4017E-02	1.7995E-02
19	1.0677E 01	1.8128E-01	1.3664E-01	1.1957E-01	8.8571E-02	5.1306E-02
20	8.3153E 00	1.9282E-01	1.5540E-01	1.3963E-01	1.0818E-01	6.5550E-02
21	6.4760E 00	1.1670E-01	8.2257E-02	7.0615E-02	5.0576E-02	2.7977E-02
22	5.0435E 00	1.8363E-01	1.4458E-01	1.2879E-01	9.8049E-02	5.7685E-02
23	3.9279E 00	6.3510E-02	4.0633E-02	3.3900E-02	2.3270E-02	1.2429E-02
24	3.0590E 00	1.1689E-01	7.7650E-02	6.5284E-02	4.5089E-02	2.3925E-02
25	2.3824E 00	1.8096E-01	1.4142E-01	1.2563E-01	9.5105E-02	5.5218E-02
26	1.8554E 00	1.9484E-01	1.5863E-01	1.4327E-01	1.1205E-01	6.7843E-02
27	1.4450E 00	1.9581E-01	1.6087E-01	1.4593E-01	1.1507E-01	7.0522E-02
28	1.1254E 00	1.9547E-01	1.6013E-01	1.4535E-01	1.1413E-01	6.9756E-02
29	8.7640E-01	1.9477E-01	1.5814E-01	1.4272E-01	1.1143E-01	6.7401E-02
30	6.8260E-01	1.9164E-01	1.5375E-01	1.3835E-01	1.0668E-01	6.3658E-02
31	5.3160E-01	1.8673E-01	1.4770E-01	1.3132E-01	1.0067E-01	5.9189E-02
32	4.1400E-01	1.8299E-01	1.4222E-01	1.2602E-01	9.4897E-02	5.4881E-02

(b) Capture cross section

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup cross section, b				
1	9.6112E 02	6.6513E-01	5.7056E-01	5.4612E-01	5.0942E-01	4.7388E-01
2	7.4852E 02	8.3883E-01	7.3452E-01	7.0413E-01	6.5313E-01	5.9403E-01
3	5.8295E 02	6.9510E-01	6.1253E-01	5.8958E-01	5.5104E-01	5.0210E-01
4	4.5400E 02	5.3653E-01	4.6540E-01	4.4804E-01	4.2305E-01	4.0055E-01
5	3.5358E 02	1.2479E 00	1.0731E 00	1.0311E 00	9.7042E-01	9.1417E-01
6	2.7536E 02	2.0556E 00	1.8206E 00	1.7575E 00	1.6960E 00	1.6366E 00
7	2.1445E 02	3.2116E 00	2.8771E 00	2.7956E 00	2.6850E 00	2.5851E 00
8	1.6702E 02	4.2580E 00	3.8252E 00	3.7102E 00	3.5399E 00	3.3834E 00
9	1.3007E 02	1.8659E 00	1.6043E 00	1.5434E 00	1.4616E 00	1.3971E 00
10	1.0130E 02	3.1466E 00	2.6308E 00	2.5031E 00	2.3216E 00	2.1627E 00
11	7.8893E 01	6.8364E-01	5.3720E-01	4.9558E-01	4.3193E-01	3.6167E-01
12	6.1442E 01	5.8913E-01	5.3010E-01	5.1575E-01	4.9656E-01	4.8377E-01
13	4.7851E 01	1.2904E 00	1.0956E 00	1.0432E 00	9.6445E-01	8.8719E-01
14	3.7266E 01	6.3685E 00	5.4565E 00	5.2774E 00	5.0761E 00	5.0028E 00
15	2.9023E 01	1.1828E 00	1.1665E 00	1.1629E 00	1.1604E 00	1.1641E 00
16	2.2603E 01	1.3886E 01	1.3442E 01	1.3349E 01	1.3219E 01	1.3103E 01
17	1.7603E 01	1.1896E 02	1.1308E 02	1.1174E 02	1.0985E 02	1.0814E 02
18	1.3710E 01	1.5878E 01	1.4992E 01	1.4794E 01	1.4519E 01	1.4270E 01
19	1.0677E 01	4.3004E 00	4.2529E 00	4.2355E 00	4.2110E 00	4.1852E 00
20	8.3153E 00	3.1933E 00	3.1845E 00	3.1815E 00	3.1764E 00	3.1710E 00
21	6.4760E 00	1.0772E 01	9.3572E 00	9.0376E 00	8.6183E 00	8.3010E 00
22	5.0435E 00	3.6803E 00	3.6556E 00	3.6465E 00	3.6310E 00	3.6156E 00
23	3.9279E 00	2.6783E 01	2.3086E 01	2.2302E 01	2.1292E 01	2.0485E 01
24	3.0590E 00	1.0939E 01	1.0155E 01	9.9510E 00	9.7033E 00	9.5187E 00
25	2.3824E 00	3.8403E 00	3.8195E 00	3.8113E 00	3.7963E 00	3.7783E 00
26	1.8554E 00	2.9971E 00	2.9956E 00	2.9949E 00	2.9935E 00	2.9915E 00
27	1.4450E 00	2.8262E 00	2.8262E 00	2.8252E 00	2.8262E 00	2.8262E 00
28	1.1254E 00	2.8876E 00	2.8875E 00	2.8875E 00	2.8874E 00	2.8873E 00
29	8.7640E-01	3.0699E 00	3.0694E 00	3.0691E 00	3.0687E 00	3.0680E 00
30	6.8260E-01	3.3185E 00	3.3175E 00	3.3172E 00	3.3164E 00	3.3154E 00
31	5.3160E-01	3.6194E 00	3.6186E 00	3.6183E 00	3.6176E 00	3.6168E 00
32	4.1400E-01	4.0175E 00	4.0157E 00	4.0150E 00	4.0135E 00	4.0118E 00

TABLE I. - Concluded. MULTIGROUP FLUXES AND CROSS SECTIONS FOR SLABS OF NATURAL TUNGSTEN SURROUNDED BY HYDROGEN

(c) Scatter cross section

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup cross section, b				
1	9.6112E 02	1.8285E 01	1.6647E 01	1.6212E 01	1.5563E 01	1.4967E 01
2	7.4852E 02	1.2751E 01	1.1568E 01	1.1362E 01	1.0862E 01	1.0320E 01
3	5.8295E 02	1.2714E 01	1.1719E 01	1.1444E 01	1.0992E 01	1.0481E 01
4	4.5400E 02	1.1228E 01	1.0738E 01	1.0515E 01	1.0437E 01	1.0277E 01
5	3.5358E 02	1.0834E 01	1.0409E 01	1.0348E 01	1.0272E 01	1.0230E 01
6	2.7536E 02	1.2844E 01	1.2550E 01	1.2477E 01	1.2369E 01	1.2262E 01
7	2.1445E 02	3.0420E 01	2.8430E 01	2.8011E 01	2.7477E 01	2.7059E 01
8	1.6702E 02	2.9536E 01	2.8357E 01	2.8533E 01	2.4686E 01	2.3947E 01
9	1.3007E 02	9.6623E 00	9.1546E 00	9.0433E 00	8.8905E 00	8.7663E 00
10	1.0130E 02	1.6095E 01	1.4784E 01	1.4469E 01	1.4039E 01	1.3710E 01
11	7.8893E 01	7.4863E 00	7.4581E 00	7.4778E 00	7.5162E 00	7.6091E 00
12	6.1442E 01	9.3156E 00	9.3119E 00	9.3104E 00	9.3072E 00	9.3025E 00
13	4.7851E 01	1.3838E 01	1.3418E 01	1.3302E 01	1.3126E 01	1.2952E 01
14	3.7266E 01	2.1734E 01	2.0276E 01	2.0000E 01	1.9713E 01	1.9569E 01
15	2.9023E 01	2.2506E 01	2.2408E 01	2.2391E 01	2.2389E 01	2.2437E 01
16	2.2603E 01	6.2593E 01	6.1060E 01	6.0477E 01	5.9380E 01	5.7955E 01
17	1.7603E 01	5.6142E 02	5.2569E 02	5.1750E 02	5.0604E 02	4.9559E 02
18	1.3710E 01	7.7449E 01	7.2341E 01	7.1208E 01	6.9635E 01	6.8224E 01
19	1.0677E 01	1.6771E 01	1.6571E 01	1.6502E 01	1.6394E 01	1.6285E 01
20	8.3153E 00	1.0010E 01	1.0014E 01	1.0015E 01	1.0016E 01	1.0017E 01
21	6.4760E 00	8.1063E 00	8.0571E 00	8.0538E 00	8.0501E 00	8.0490E 00
22	5.0435E 00	7.6737E 00	7.6694E 00	7.6678E 00	7.6652E 00	7.6628E 00
23	3.9279E 00	9.0830E 00	8.9358E 00	8.9050E 00	8.8665E 00	8.8339E 00
24	3.0590E 00	5.4600E 00	5.4927E 00	5.5015E 00	5.5138E 00	5.5229E 00
25	2.3824E 00	5.9354E 00	5.9380E 00	5.9391E 00	5.9410E 00	5.9433E 00
26	1.8554E 00	6.0731E 00	6.0735E 00	6.0737E 00	6.0740E 00	6.0745E 00
27	1.4450E 00	6.1514E 00	6.1515E 00	6.1515E 00	6.1515E 00	6.1515E 00
28	1.1254E 00	6.2142E 00	6.2142E 00	6.2142E 00	6.2142E 00	6.2142E 00
29	8.7640E-01	6.2365E 00	6.2364E 00	6.2364E 00	6.2363E 00	6.2362E 00
30	6.8260E-01	6.2545E 00	6.2544E 00	6.2544E 00	6.2544E 00	6.2543E 00
31	5.3160E-01	6.2669E 00	6.2669E 00	6.2669E 00	6.2668E 00	6.2668E 00
32	4.1400E-01	6.2761E 00	6.2761E 00	6.2760E 00	6.2760E 00	6.2760E 00

TABLE II. - MULTIGROUP FLUXES AND CROSS SECTIONS FOR SLABS OF NATURAL TUNGSTEN SURROUNDED BY LITHIUM HYDRIDE

(a) Fluxes

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup fluxes				
1	9.6112E 02	2.1104E-01	1.9741E-01	1.9199E-01	1.8044E-01	1.5868E-01
2	7.4852E 02	2.3144E-01	2.1753E-01	2.1143E-01	1.9821E-01	1.7399E-01
3	5.8295E 02	2.2341E-01	2.1152E-01	2.0593E-01	1.9210E-01	1.6097E-01
4	4.5400E 02	2.2657E-01	2.1688E-01	2.1203E-01	1.9961E-01	1.7076E-01
5	3.5358E 02	2.0877E-01	1.9349E-01	1.8564E-01	1.7106E-01	1.4098E-01
6	2.7536E 02	1.8695E-01	1.6318E-01	1.5235E-01	1.3041E-01	9.2909E-02
7	2.1445E 02	1.5942E-01	1.2927E-01	1.1719E-01	9.3270E-02	5.9685E-02
8	1.6702E 02	1.6712E-01	1.3599E-01	1.2367E-01	9.9153E-02	6.3774E-02
9	1.3007E 02	1.8405E-01	1.6271E-01	1.5310E-01	1.3129E-01	9.2175E-02
10	1.0130E 02	1.6461E-01	1.4264E-01	1.3341E-01	1.1348E-01	7.9823E-02
11	7.8893E 01	1.9737E-01	1.8338E-01	1.7544E-01	1.5934E-01	1.2344E-01
12	6.1442E 01	1.9899E-01	1.9075E-01	1.8530E-01	1.7705E-01	1.5383E-01
13	4.7851E 01	1.7658E-01	1.6351E-01	1.5752E-01	1.4345E-01	1.1585E-01
14	3.7266E 01	1.1605E-01	8.6197E-02	7.5312E-02	5.5755E-02	3.2376E-02
15	2.9023E 01	1.6652E-01	1.4390E-01	1.3327E-01	1.0992E-01	7.2793E-02
16	2.2603E 01	6.7473E-02	4.2852E-02	3.6154E-02	2.5785E-02	1.4789E-02
17	1.7603E 01	1.0639E-02	5.9117E-03	4.7712E-03	3.1352E-03	1.6134E-03
18	1.3710E 01	6.9414E-02	4.1708E-02	3.4244E-02	2.3035E-02	1.2102E-02
19	1.0677E 01	1.1811E-01	8.8625E-02	7.7417E-02	5.7127E-02	3.2875E-02
20	8.3153E 00	1.1894E-01	9.5441E-02	8.5512E-02	6.6093E-02	3.9809E-02
21	6.4760E 00	6.7310E-02	4.7126E-02	4.0355E-02	2.8762E-02	1.5791E-02
22	5.0435E 00	9.9631E-02	7.8055E-02	6.9394E-02	5.2623E-02	3.0753E-02
23	3.9279E 00	3.2565E-02	2.0745E-02	1.7274E-02	1.1809E-02	6.2635E-03
24	3.0590E 00	5.3594E-02	3.5277E-02	2.9562E-02	2.0292E-02	1.0673E-02
25	2.3824E 00	7.6227E-02	5.9114E-02	5.2359E-02	3.9409E-02	2.2584E-02
26	1.8554E 00	7.4005E-02	5.9805E-02	5.3875E-02	4.1909E-02	2.5168E-02
27	1.4450E 00	6.7160E-02	5.4806E-02	4.9532E-02	3.8921E-02	2.3681E-02
28	1.1254E 00	5.9490E-02	4.8405E-02	4.3741E-02	3.4251E-02	2.0785E-02
29	8.7640E-01	5.1766E-02	4.1747E-02	3.7583E-02	2.9235E-02	1.7541E-02
30	6.8260E-01	4.4205E-02	3.5220E-02	3.1543E-02	2.4259E-02	1.4372E-02
31	5.3160E-01	3.7181E-02	2.9202E-02	2.5995E-02	1.9753E-02	1.1527E-02
32	4.1400E-01	3.0790E-02	2.3768E-02	2.1008E-02	1.5744E-02	9.0392E-03

TABLE II. - Concluded. MULTIGROUP FLUXES AND CROSS SECTIONS FOR SLABS OF NATURAL TUNGSTEN SURROUNDED BY LITHIUM HYDRIDE

(b) Capture cross section

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup cross section, b				
1	9.6112E 02	6.0433E-01	5.7032E-01	5.4589E-01	5.0922E-01	4.7367E-01
2	7.4852E 02	8.3935E-01	7.9404E-01	7.6355E-01	6.5265E-01	5.9355E-01
3	5.8295E 02	6.9586E-01	6.1323E-01	5.9037E-01	5.5173E-01	5.0280E-01
4	4.5400E 02	5.3590E-01	4.6572E-01	4.4836E-01	4.2336E-01	4.0085E-01
5	3.5358E 02	1.2474E 00	1.0728E 00	1.0305E 00	9.7000E-01	9.1370E-01
6	2.7536E 02	2.0546E 00	1.8200E 00	1.7567E 00	1.6952E 00	1.6358E 00
7	2.1445E 02	3.2037E 00	2.8745E 00	2.7941E 00	2.6825E 00	2.5825E 00
8	1.6702E 02	4.2505E 00	3.8182E 00	3.7035E 00	3.5334E 00	3.3771E 00
9	1.3007E 02	1.8665E 00	1.6045E 00	1.5437E 00	1.4618E 00	1.3972E 00
10	1.0130E 02	3.1364E 00	2.6224E 00	2.4952E 00	2.3142E 00	2.1558E 00
11	7.8893E 01	6.8900E-01	5.4118E-01	5.0019E-01	4.3494E-01	3.6407E-01
12	6.1442E 01	5.8707E-01	5.2831E-01	5.1402E-01	4.9492E-01	4.8221E-01
13	4.7851E 01	1.2782E 00	1.0658E 00	1.0340E 00	9.5627E-01	8.7995E-01
14	3.7266E 01	6.4212E 00	5.5020E 00	5.3218E 00	5.1206E 00	5.0514E 00
15	2.9023E 01	1.1770E 00	1.1610E 00	1.1576E 00	1.1554E 00	1.1593E 00
16	2.2603E 01	1.3914E 01	1.3462E 01	1.3367E 01	1.3234E 01	1.3115E 01
17	1.7603E 01	1.1797E 02	1.1209E 02	1.1075E 02	1.0887E 02	1.0716E 02
18	1.3710E 01	1.6034E 01	1.5135E 01	1.4933E 01	1.4652E 01	1.4399E 01
19	1.0677E 01	4.3168E 00	4.2592E 00	4.2528E 00	4.2270E 00	4.2012E 00
20	8.3153E 00	3.1878E 00	3.1791E 00	3.1761E 00	3.1712E 00	3.1659E 00
21	6.4760E 00	1.0887E 01	9.4560E 00	9.1328E 00	8.7090E 00	8.3879E 00
22	5.0435E 00	3.6644E 00	3.6401E 00	3.6313E 00	3.6160E 00	3.6009E 00
23	3.9279E 00	2.6140E 01	2.2543E 01	2.1775E 01	2.0789E 01	1.9998E 01
24	3.0590E 00	1.1111E 01	1.0308E 01	1.0109E 01	9.8456E 00	9.6573E 00
25	2.3824E 00	3.8629E 00	3.8416E 00	3.8332E 00	3.8177E 00	3.7991E 00
26	1.8554E 00	3.0060E 00	3.0045E 00	3.0038E 00	3.0024E 00	3.0004E 00
27	1.4450E 00	2.8264E 00	2.8264E 00	2.8254E 00	2.8264E 00	2.8264E 00
28	1.1254E 00	2.8858E 00	2.8857E 00	2.8855E 00	2.8856E 00	2.8855E 00
29	8.7640E-01	3.0628E 00	3.0622E 00	3.0620E 00	3.0615E 00	3.0609E 00
30	6.8260E-01	3.3083E 00	3.3074E 00	3.3070E 00	3.3062E 00	3.3051E 00
31	5.3160E-01	3.6115E 00	3.6107E 00	3.6104E 00	3.6098E 00	3.6089E 00
32	4.1400E-01	4.0000E 00	3.9981E 00	3.9974E 00	3.9959E 00	3.9941E 00

(c) Scatter cross section

1	9.6112E 02	1.8232E 01	1.6645E 01	1.6211E 01	1.5562E 01	1.4965E 01
2	7.4852E 02	1.2750E 01	1.1565E 01	1.1353E 01	1.0858E 01	1.0315E 01
3	5.8295E 02	1.2724E 01	1.1729E 01	1.1453E 01	1.1000E 01	1.0480E 01
4	4.5400E 02	1.1230E 01	1.0741E 01	1.0518E 01	1.0433E 01	1.0279E 01
5	3.5358E 02	1.0687E 01	1.0412E 01	1.0351E 01	1.0275E 01	1.0232E 01
6	2.7536E 02	1.2838E 01	1.2544E 01	1.2471E 01	1.2364E 01	1.2255E 01
7	2.1445E 02	3.0410E 01	2.8422E 01	2.8032E 01	2.7469E 01	2.7050E 01
8	1.6702E 02	2.9529E 01	2.6355E 01	2.5535E 01	2.4685E 01	2.3949E 01
9	1.3007E 02	9.6656E 00	9.1665E 00	9.0495E 00	8.8911E 00	8.7665E 00
10	1.0130E 02	1.6104E 01	1.4795E 01	1.4430E 01	1.4051E 01	1.3723E 01
11	7.8893E 01	7.4795E 00	7.4510E 00	7.4705E 00	7.5093E 00	7.6033E 00
12	6.1442E 01	9.3150E 00	9.3113E 00	9.3097E 00	9.3065E 00	9.3019E 00
13	4.7851E 01	1.3807E 01	1.3392E 01	1.3277E 01	1.3103E 01	1.2931E 01
14	3.7266E 01	2.1826E 01	2.0349E 01	2.0071E 01	1.9782E 01	1.9745E 01
15	2.9023E 01	2.2462E 01	2.2365E 01	2.2349E 01	2.2350E 01	2.2401E 01
16	2.2603E 01	6.2393E 01	5.8838E 01	5.8249E 01	5.9134E 01	5.7591E 01
17	1.7603E 01	5.5376E 02	5.1847E 02	5.1033E 02	4.9895E 02	4.8857E 02
18	1.3710E 01	7.8364E 01	7.3165E 01	7.2005E 01	7.0405F 01	6.8965E 01
19	1.0677E 01	1.6840E 01	1.6640E 01	1.6573E 01	1.6462E 01	1.6352E 01
20	8.3153E 00	1.0027E 01	1.0031E 01	1.0032E 01	1.0033E 01	1.0034E 01
21	6.4760E 00	8.1237E 00	8.0843E 00	8.0751E 00	8.0673E 00	8.0667E 00
22	5.0435E 00	7.6708E 00	7.6667E 00	7.6651E 00	7.6625E 00	7.6601E 00
23	3.9279E 00	9.0491E 00	8.9227E 00	8.8931E 00	8.8536E 00	8.8212E 00
24	3.0590E 00	5.4524E 00	5.4858E 00	5.4947E 00	5.5071E 00	5.5164E 00
25	2.3824E 00	5.9324E 00	5.9351E 00	5.9362E 00	5.9382E 00	5.9405E 00
26	1.8554E 00	6.0710E 00	6.0714E 00	6.0715E 00	6.0719E 00	6.0724E 00
27	1.4450E 00	6.1502E 00	6.1502E 00	6.1502E 00	6.1502E 00	6.1503E 00
28	1.1254E 00	6.2139E 00	6.2139E 00	6.2139E 00	6.2139E 00	6.2138E 00
29	8.7640E-01	6.2357E 00	6.2356E 00	6.2356E 00	6.2356E 00	6.2355E 00
30	6.8260E-01	6.2539E 00	6.2539E 00	6.2539E 00	6.2538E 00	6.2538E 00
31	5.3160E-01	6.2666E 00	6.2666E 00	6.2665E 00	6.2666E 00	6.2665E 00
32	4.1400E-01	6.2758E 00	6.2757E 00	6.2757E 00	6.2757E 00	6.2757E 00

TABLE III. - MULTIGROUP FLUXES AND CROSS SECTIONS FOR SLABS

OF DEPLETED URANIUM SURROUNDED BY HYDROGEN

(a) Fluxes

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup fluxes				
1	9.6112E 02	2.3632E-01	2.2586E-01	2.2090E-01	2.0860E-01	1.7980E-01
2	7.4852E 02	2.3643E-01	2.2615E-01	2.2114E-01	2.0855E-01	1.7984E-01
3	5.8295E 02	2.3707E-01	2.2724E-01	2.2232E-01	2.0979E-01	1.8073E-01
4	4.5400E 02	2.3706E-01	2.2841E-01	2.2412E-01	2.1304E-01	1.8592E-01
5	3.5358E 02	2.3613E-01	2.2699E-01	2.2238E-01	2.1044E-01	1.8203E-01
6	2.7536E 02	2.3867E-01	2.3100E-01	2.2720E-01	2.1742E-01	1.9365E-01
7	2.1445E 02	2.3629E-01	2.2702E-01	2.2229E-01	2.1008E-01	1.8119E-01
8	1.6702E 02	2.2860E-01	2.1295E-01	2.0552E-01	1.8827E-01	1.5267E-01
9	1.3007E 02	2.3578E-01	2.2659E-01	2.2188E-01	2.0936E-01	1.7807E-01
10	1.0130E 02	2.0716E-01	1.8963E-01	1.8221E-01	1.6609E-01	1.3738E-01
11	7.8893E 01	2.2929E-01	2.1364E-01	2.0507E-01	1.8762E-01	1.4836E-01
12	6.1442E 01	2.1163E-01	1.9301E-01	1.8438E-01	1.6392E-01	1.2354E-01
13	4.7851E 01	2.4357E-01	2.3726E-01	2.3367E-01	2.2328E-01	1.9343E-01
14	3.7266E 01	2.1587E-01	1.9995E-01	1.9338E-01	1.7940E-01	1.5463E-01
15	2.9023E 01	1.8694E-01	1.6579E-01	1.5692E-01	1.3736E-01	1.0136E-01
16	2.2603E 01	2.3155E-01	2.1691E-01	2.0972E-01	1.9230E-01	1.5617E-01
17	1.7603E 01	1.5396E-01	1.2592E-01	1.1511E-01	9.3532E-02	6.1308E-02
18	1.3710E 01	2.3912E-01	2.2932E-01	2.2405E-01	2.0979E-01	1.7407E-01
19	1.0677E 01	2.4093E-01	2.3252E-01	2.2801E-01	2.1599E-01	1.8667E-01
20	8.3153E 00	2.3045E-01	2.1540E-01	2.0823E-01	1.9147E-01	1.5877E-01
21	6.4760E 00	1.2664E-01	1.0105E-01	9.1534E-02	7.3205E-02	4.7763E-02
22	5.0435E 00	1.5960E-01	1.2470E-01	1.1159E-01	8.6514E-02	5.2757E-02
23	3.9279E 00	2.2814E-01	2.0944E-01	2.0039E-01	1.7723E-01	1.3184E-01
24	3.0590E 00	2.3614E-01	2.2373E-01	2.1724E-01	2.0039E-01	1.6200E-01
25	2.3824E 00	2.3897E-01	2.2914E-01	2.2395E-01	2.1026E-01	1.7722E-01
26	1.8554E 00	2.4108E-01	2.3241E-01	2.2777E-01	2.1539E-01	1.8519E-01
27	1.4450E 00	2.4288E-01	2.3494E-01	2.3065E-01	2.1903E-01	1.9026E-01
28	1.1254E 00	2.4123E-01	2.3195E-01	2.2702E-01	2.1407E-01	1.8331E-01
29	8.7640E-01	2.4230E-01	2.3219E-01	2.2683E-01	2.1279E-01	1.7992E-01
30	6.8260E-01	2.4428E-01	2.3510E-01	2.3017E-01	2.1706E-01	1.8533E-01
31	5.3160E-01	2.4430E-01	2.3451E-01	2.2931E-01	2.1554E-01	1.8284E-01
32	4.1400E-01	2.4358E-01	2.3265E-01	2.2588E-01	2.1181E-01	1.7691E-01

(b) Capture cross section for uranium-238

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup cross section, b				
1	9.6112E 02	7.0351E-01	6.0404E-01	5.8034E-01	5.4701E-01	5.1757E-01
2	7.4852E 02	8.1829E-01	6.9860E-01	6.6959E-01	6.2836E-01	5.9193E-01
3	5.8295E 02	7.5015E-01	6.4369E-01	6.1892E-01	5.8448E-01	5.5476E-01
4	4.5400E 02	7.6245E-01	6.4899E-01	6.2235E-01	5.8490E-01	5.5154E-01
5	3.5358E 02	6.6682E-01	5.5995E-01	5.3557E-01	5.0218E-01	4.7386E-01
6	2.7536E 02	6.4347E-01	5.5584E-01	5.3703E-01	5.0971E-01	4.8523E-01
7	2.1445E 02	7.3474E-01	6.2453E-01	6.0032E-01	5.6731E-01	5.4205E-01
8	1.6702E 02	1.3621E 00	1.2075E 00	1.1595E 00	1.1157E 00	1.0750E 00
9	1.3007E 02	6.6520E-01	5.4226E-01	5.1338E-01	4.7326E-01	4.3679E-01
10	1.0130E 02	2.4831E 00	2.0456E 00	1.9288E 00	1.7439E 00	1.5336E 00
11	7.8893E 01	1.2389E 00	1.0849E 00	1.0495E 00	1.0012E 00	9.6495E-01
12	6.1442E 01	2.2538E 00	1.8309E 00	1.7239E 00	1.5718E 00	1.4495E 00
13	4.7851E 01	7.9603E-02	7.8931E-02	7.8532E-02	7.7389E-02	7.4455E-02
14	3.7266E 01	1.4819E 00	1.2527E 00	1.1822E 00	1.0622E 00	9.1657E-01
15	2.9023E 01	4.5605E 00	3.3339E 00	3.0754E 00	2.6061E 00	2.1503E 00
16	2.2603E 01	6.7411E-01	6.6103E-01	6.5553E-01	6.4442E-01	6.2889E-01
17	1.7603E 01	7.8430E 00	6.1764E 00	5.7505E 00	5.1285E 00	4.5884E 00
18	1.3710E 01	3.7231E-01	3.7084E-01	3.6998E-01	3.6756E-01	3.6144E-01
19	1.0677E 01	1.7479E-01	1.7478E-01	1.7478E-01	1.7479E-01	1.7485E-01
20	8.3153E 00	6.4598E-01	6.3570E-01	6.3053E-01	6.1903E-01	5.9975E-01
21	6.4760E 00	1.2307E 01	9.3441E 00	8.6274E 00	7.5927E 00	6.6011E 00
22	5.0435E 00	6.9897E 00	5.9702E 00	5.6832E 00	5.2413E 00	4.8077E 00
23	3.9279E 00	1.1580E 00	1.1494E 00	1.1450E 00	1.1345E 00	1.1141E 00
24	3.0590E 00	6.5341E-01	6.5316E-01	6.5302E-01	6.5265E-01	6.5179E-01
25	2.3824E 00	5.1620E-01	5.1615E-01	5.1613E-01	5.1604E-01	5.1580E-01
26	1.8554E 00	4.6919E-01	4.6919E-01	4.6919E-01	4.6918E-01	4.6917E-01
27	1.4450E 00	4.6005E-01	4.6005E-01	4.6005E-01	4.6005E-01	4.6006E-01
28	1.1254E 00	4.7107E-01	4.7103E-01	4.7102E-01	4.7098E-01	4.7089E-01
29	8.7640E-01	4.9843E-01	4.9851E-01	4.9855E-01	4.9865E-01	4.9883E-01
30	6.8260E-01	5.3615E-01	5.3614E-01	5.3613E-01	5.3612E-01	5.3611E-01
31	5.3160E-01	5.8429E-01	5.8424E-01	5.8421E-01	5.8415E-01	5.8401E-01
32	4.1400E-01	6.4293E-01	6.4283E-01	6.4278E-01	6.4265E-01	6.4235E-01

TABLE III. - Continued. *MULTIGROUP FLUXES AND CROSS SECTIONS FOR SLABS OF DEPLETED URANIUM SURROUNDED BY HYDROGEN*

(c) Scatter cross section for uranium-238

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup cross section, b				
1	9.6112E 02	1.2186E 01	1.1697E 01	1.1556E 01	1.1324E 01	1.1047E 01
2	7.4852E 02	1.1216E 01	1.0849E 01	1.0743E 01	1.0584E 01	1.0389E 01
3	5.8295E 02	1.1795E 01	1.1476E 01	1.1387E 01	1.1241E 01	1.1075E 01
4	4.5400E 02	1.1081E 01	1.0924E 01	1.0884E 01	1.0823E 01	1.0763E 01
5	3.5358E 02	1.1487E 01	1.1433E 01	1.1421E 01	1.1404E 01	1.1389E 01
6	2.7536E 02	1.1250E 01	1.1023E 01	1.0959E 01	1.0852E 01	1.0724E 01
7	2.1445E 02	1.1456E 01	1.1292E 01	1.1252E 01	1.1192E 01	1.1129E 01
8	1.6702E 02	1.3045E 01	1.1997E 01	1.1791E 01	1.1222E 01	1.0704E 01
9	1.3007E 02	1.0925E 01	1.0921E 01	1.0922E 01	1.0925E 01	1.0935E 01
10	1.0130E 02	1.7555E 01	1.6650E 01	1.6412E 01	1.6028E 01	1.5558E 01
11	7.8893E 01	7.8922E 00	7.9126E 00	7.9292E 00	7.9752E 00	8.0793E 00
12	6.1442E 01	1.3384E 01	1.3148E 01	1.3125E 01	1.3155E 01	1.3339E 01
13	4.7851E 01	9.8132E 00	9.8239E 00	9.8303E 00	9.8489E 00	9.8997E 00
14	3.7266E 01	1.8774E 01	1.8037E 01	1.7795E 01	1.7363E 01	1.6807E 01
15	2.9023E 01	7.7772E 00	7.0452E 00	6.9019E 00	6.7444E 00	6.7119E 00
16	2.2603E 01	1.2591E 01	1.2532E 01	1.2504E 01	1.2444E 01	1.2350E 01
17	1.7603E 01	1.1061E 01	1.0548E 01	1.0438E 01	1.0331E 01	1.0424E 01
18	1.3710E 01	9.0752E 00	9.0789E 00	9.0813E 00	9.0884E 00	9.1078E 00
19	1.0677E 01	1.0867E 01	1.0867E 01	1.0867E 01	1.0867E 01	1.0867E 01
20	8.3153E 00	1.2095E 01	1.2083E 01	1.2077E 01	1.2063E 01	1.2041E 01
21	6.4760E 00	1.5315E 01	1.4909E 01	1.4797E 01	1.4623E 01	1.4443E 01
22	5.0435E 00	7.7044E 00	7.8811E 00	7.9359E 00	8.0297E 00	8.1302E 00
23	3.9279E 00	9.4465E 00	9.4531E 00	9.4554E 00	9.4644E 00	9.4799E 00
24	3.0590E 00	9.8870E 00	9.8873E 00	9.8875E 00	9.8879E 00	9.8889E 00
25	2.3824E 00	1.0365E 01	1.0365E 01	1.0365E 01	1.0365E 01	1.0368E 01
26	1.8554E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
27	1.4450E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
28	1.1254E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
29	8.7640E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
30	6.8260E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
31	5.3160E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
32	4.1400E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01

(d) Capture cross section for uranium-235

1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	0.	0.	0.	0.	0.
6	2.7536E 02	0.	0.	0.	0.	0.
7	2.1445E 02	0.	0.	0.	0.	0.
8	1.6702E 02	0.	0.	0.	0.	0.
9	1.3007E 02	6.1546E 00	6.3086E 00	6.3818E 00	6.5529E 00	6.8739E 00
10	1.0130E 02	6.9262E 00	6.8706E 00	6.8231E 00	6.6705E 00	6.3019E 00
11	7.8893E 01	1.3864E 01	1.4107E 01	1.4210E 01	1.4412E 01	1.4614E 01
12	6.1442E 01	1.2716E 01	1.3036E 01	1.3150E 01	1.3336E 01	1.3496E 01
13	4.7851E 01	2.3693E 01	2.3680E 01	2.3691E 01	2.3748E 01	2.3907E 01
14	3.7266E 01	2.3937E 01	2.3883E 01	2.3803E 01	2.3563E 01	2.3087E 01
15	2.9023E 01	4.3767E 01	4.2479E 01	4.1818E 01	4.0293E 01	3.7629E 01
16	2.2603E 01	3.4687E 01	3.4153E 01	3.3924E 01	3.3447E 01	3.2750E 01
17	1.7603E 01	4.1953E 01	4.1212E 01	4.0569E 01	3.9204E 01	3.6387E 01
18	1.3710E 01	2.8563E 01	2.8582E 01	2.8505E 01	2.8688E 01	2.8912E 01
19	1.0677E 01	8.8774E 01	8.7128E 01	8.6541E 01	8.5518E 01	8.4455E 01
20	8.3153E 00	7.1855E 01	6.8339E 01	6.6919E 01	6.4095E 01	6.0104E 01
21	6.4760E 00	1.3893E 01	1.2412E 01	1.2010E 01	1.1424E 01	1.0883E 01
22	5.0435E 00	2.1973E 01	1.7865E 01	1.6804E 01	1.5262E 01	1.3845E 01
23	3.9279E 00	4.2991E 01	4.1945E 01	4.1424E 01	4.0167E 01	3.7734E 01
24	3.0590E 00	2.5788E 01	2.5686E 01	2.5542E 01	2.5551E 01	2.5416E 01
25	2.3824E 00	4.2403E 00	4.2354E 00	4.2318E 00	4.2207E 00	4.1901E 00
26	1.8554E 00	1.8325E 01	1.8272E 01	1.8250E 01	1.8208E 01	1.8162E 01
27	1.4450E 00	2.0245E 00	2.0244E 00	2.0244E 00	2.0243E 00	2.0244E 00
28	1.1254E 00	1.3196E 01	1.3148E 01	1.3123E 01	1.3062E 01	1.2937E 01
29	8.7640E-01	1.5068E 01	1.4996E 01	1.4961E 01	1.4879E 01	1.4733E 01
30	6.8260E-01	2.9930E 00	2.9934E 00	2.9936E 00	2.9939E 00	2.9943E 00
31	5.3160E-01	2.7023E 00	2.7017E 00	2.7014E 00	2.7007E 00	2.6990E 00
32	4.1400E-01	5.0927E 00	5.0870E 00	5.0840E 00	5.0762E 00	5.0583E 00

TABLE III. - Concluded. MULTIGROUP FLUXES AND CROSS SECTIONS FOR SLABS OF DEPLETED URANIUM SURROUNDED BY HYDROGEN

(e) Scatter cross section for uranium-235

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup cross section, b				
1	9.6112E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
2	7.4852E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
3	5.8295E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
4	4.5400E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
5	3.5358E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
6	2.7536E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
7	2.1445E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
8	1.6702E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
9	1.3007E 02	1.1377E 01	1.1398E 01	1.1407E 01	1.1426E 01	1.1458E 01
10	1.0130E 02	1.0882E 01	1.0856E 01	1.0843E 01	1.0811E 01	1.0748E 01
11	7.8893E 01	1.1603E 01	1.1633E 01	1.1645E 01	1.1669E 01	1.1695E 01
12	6.1442E 01	1.1148E 01	1.1164E 01	1.1173E 01	1.1179E 01	1.1183E 01
13	4.7851E 01	1.1775E 01	1.1767E 01	1.1763E 01	1.1752E 01	1.1717E 01
14	3.7266E 01	1.1675E 01	1.1624E 01	1.1600E 01	1.1548E 01	1.1464E 01
15	2.9023E 01	1.1676E 01	1.1399E 01	1.1294E 01	1.1096E 01	1.0833E 01
16	2.2603E 01	1.1450E 01	1.1445E 01	1.1442E 01	1.1435E 01	1.1421E 01
17	1.7603E 01	1.2345E 01	1.2124E 01	1.2025E 01	1.1818E 01	1.1521E 01
18	1.3710E 01	1.0794E 01	1.0798E 01	1.0800E 01	1.0807E 01	1.0821E 01
19	1.0677E 01	1.2406E 01	1.2390E 01	1.2388E 01	1.2390E 01	1.2407E 01
20	8.3153E 00	1.3291E 01	1.3245E 01	1.3232E 01	1.3213E 01	1.3194E 01
21	6.4760E 00	9.0566E 00	8.9640E 00	8.9321E 00	8.8766E 00	8.8111E 00
22	5.0435E 00	9.7609E 00	9.7969E 00	9.8117E 00	9.8392E 00	9.8717E 00
23	3.9279E 00	9.8622E 00	9.8692E 00	9.8727E 00	9.8812E 00	9.8976E 00
24	3.0590E 00	1.0191E 01	1.0191E 01	1.0190E 01	1.0190E 01	1.0188E 01
25	2.3824E 00	9.9837E 00	9.9839E 00	9.9840E 00	9.9844E 00	9.9854E 00
26	1.8554E 00	1.0250E 01	1.0250E 01	1.0250E 01	1.0250E 01	1.0250E 01
27	1.4450E 00	1.0265E 01	1.0265E 01	1.0265E 01	1.0265E 01	1.0265E 01
28	1.1254E 00	1.0408E 01	1.0408E 01	1.0408E 01	1.0408E 01	1.0408E 01
29	8.7640E-01	1.0177E 01	1.0177E 01	1.0177E 01	1.0177E 01	1.0177E 01
30	6.8260E-01	1.0208E 01	1.0208E 01	1.0208E 01	1.0208E 01	1.0208E 01
31	5.3160E-01	1.0271E 01	1.0271E 01	1.0271E 01	1.0271E 01	1.0271E 01
32	4.1400E-01	1.0322E 01	1.0322E 01	1.0322E 01	1.0322E 01	1.0322E 01

(f) Fission cross section for uranium-235

1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	0.	0.	0.	0.	0.
6	2.7536E 02	0.	0.	0.	0.	0.
7	2.1445E 02	0.	0.	0.	0.	0.
8	1.6702E 02	0.	0.	0.	0.	0.
9	1.3007E 02	4.8810E 00	5.0049E 00	5.0533E 00	5.2000E 00	5.4479E 00
10	1.0130E 02	5.2428E 00	5.2396E 00	5.2374E 00	5.2210E 00	5.1594E 00
11	7.8893E 01	6.2361E 00	6.1957E 00	6.1880E 00	6.1843E 00	6.1936E 00
12	6.1442E 01	1.2623E 01	1.3080E 01	1.3248E 01	1.3545E 01	1.3875E 01
13	4.7851E 01	2.8775E 01	2.8662E 01	2.8625E 01	2.8558E 01	2.8374E 01
14	3.7266E 01	2.0068E 01	1.9670E 01	1.9473E 01	1.9044E 01	1.8372E 01
15	2.9023E 01	5.2024E 01	4.8634E 01	4.7150E 01	4.4093E 01	3.9450E 01
16	2.2603E 01	3.4554E 01	3.4300E 01	3.4184E 01	3.3927E 01	3.3527E 01
17	1.7603E 01	6.1991E 01	6.1646E 01	6.1133E 01	5.9535E 01	5.6115E 01
18	1.3710E 01	2.9183E 01	2.9187E 01	2.9199E 01	2.9247E 01	2.9393E 01
19	1.0677E 01	3.4308E 01	3.3599E 01	3.3384E 01	3.3100E 01	3.3039E 01
20	8.3153E 00	1.2891E 02	1.2255E 02	1.1997E 02	1.1482E 02	1.0750E 02
21	6.4760E 00	1.5417E 01	1.4788E 01	1.4643E 01	1.4473E 01	1.4389E 01
22	5.0435E 00	1.1084E 01	9.5865E 00	9.1425E 00	8.4297E 00	7.6840E 00
23	3.9279E 00	6.4504E 00	6.3424E 00	6.2888E 00	6.1591E 00	5.9084E 00
24	3.0590E 00	3.3466E 01	3.3381E 01	3.3347E 01	3.3285E 01	3.3223E 01
25	2.3824E 00	1.0210E 01	1.0200E 01	1.0193E 01	1.0168E 01	1.0097E 01
26	1.8554E 00	6.4863E 00	6.4720E 00	6.4652E 00	6.4547E 00	6.4422E 00
27	1.4450E 00	3.5034E 00	3.5036E 00	3.5038E 00	3.5045E 00	3.5072E 00
28	1.1254E 00	3.5081E 01	3.4949E 01	3.4881E 01	3.4713E 01	3.4369E 01
29	8.7640E-01	4.0298E 01	4.0102E 01	4.0005E 01	3.9781E 01	3.9381E 01
30	6.8260E-01	7.2465E 00	7.2476E 00	7.2481E 00	7.2491E 00	7.2500E 00
31	5.3160E-01	6.4742E 00	6.4726E 00	6.4718E 00	6.4697E 00	6.4650E 00
32	4.1400E-01	1.3243E 01	1.3227E 01	1.3219E 01	1.3197E 01	1.3146E 01

TABLE IV. - MULTIGROUP FLUXES AND CROSS SECTIONS FOR SLABS

OF DEPLETED URANIUM SURROUNDED BY LITHIUM HYDRIDE

(a) Fluxes

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup fluxes				
1	9.6112E 02	2.3061E-01	2.2015E-01	2.1519E-01	2.0328E-01	1.7552E-01
2	7.4852E 02	2.2916E-01	2.1893E-01	2.1395E-01	2.0182E-01	1.7328E-01
3	5.8295E 02	2.2806E-01	2.1630E-01	2.1346E-01	2.0144E-01	1.7270E-01
4	4.5400E 02	2.2613E-01	2.1755E-01	2.1334E-01	2.0277E-01	1.7608E-01
5	3.5358E 02	2.2310E-01	2.1411E-01	2.0953E-01	1.9834E-01	1.7067E-01
6	2.7536E 02	2.2309E-01	2.1557E-01	2.1187E-01	2.0269E-01	1.7958E-01
7	2.1445E 02	2.1819E-01	2.0925E-01	2.0474E-01	1.9341E-01	1.6586E-01
8	1.6702E 02	2.0817E-01	1.9951E-01	1.9570E-01	1.7081E-01	1.3763E-01
9	1.3007E 02	2.1141E-01	2.0272E-01	1.9831E-01	1.8695E-01	1.5793E-01
10	1.0130E 02	1.8275E-01	1.6698E-01	1.6032E-01	1.4607E-01	1.2013E-01
11	7.8893E 01	1.9820E-01	1.8420E-01	1.7747E-01	1.6136E-01	1.2661E-01
12	6.1442E 01	1.7898E-01	1.6285E-01	1.5540E-01	1.3798E-01	1.0321E-01
13	4.7851E 01	2.0081E-01	1.9504E-01	1.9185E-01	1.8303E-01	1.5728E-01
14	3.7266E 01	1.7344E-01	1.6033E-01	1.5493E-01	1.4363E-01	1.2304E-01
15	2.9023E 01	1.4476E-01	1.2785E-01	1.2078E-01	1.0543E-01	7.7018E-02
16	2.2603E 01	1.7334E-01	1.6238E-01	1.5532E-01	1.4359E-01	1.1571E-01
17	1.7603E 01	1.1064E-01	9.0069E-02	8.2177E-02	6.6574E-02	4.3202E-02
18	1.3710E 01	1.6507E-01	1.5771E-01	1.5384E-01	1.4372E-01	1.1815E-01
19	1.0677E 01	1.5852E-01	1.5246E-01	1.4930E-01	1.4119E-01	1.2114E-01
20	8.3153E 00	1.4379E-01	1.3404E-01	1.2944E-01	1.1893E-01	9.8041E-02
21	6.4760E 00	7.5222E-02	5.9903E-02	5.4205E-02	4.3292E-02	2.8016E-02
22	5.0435E 00	8.6793E-02	6.7320E-02	6.0354E-02	4.6331E-02	2.7871E-02
23	3.9279E 00	1.1582E-01	1.0578E-01	1.0083E-01	8.8966E-02	6.5371E-02
24	3.0590E 00	1.1077E-01	1.0451E-01	1.0131E-01	9.3246E-02	7.4725E-02
25	2.3824E 00	1.0250E-01	9.7902E-02	9.5545E-02	8.9543E-02	7.4939E-02
26	1.8554E 00	9.3703E-02	9.0010E-02	8.8097E-02	8.3209E-02	7.1132E-02
27	1.4450E 00	8.4555E-02	8.1502E-02	7.9911E-02	7.5821E-02	6.5509E-02
28	1.1254E 00	7.4636E-02	7.1529E-02	6.9931E-02	6.5892E-02	5.6184E-02
29	8.7640E-01	6.5531E-02	6.2558E-02	6.1023E-02	5.7167E-02	4.8053E-02
30	6.8260E-01	5.7327E-02	5.4983E-02	5.3754E-02	5.0647E-02	4.3019E-02
31	5.3160E-01	4.9216E-02	4.7093E-02	4.5995E-02	4.3207E-02	3.6499E-02
32	4.1400E-01	4.1646E-02	3.9661E-02	3.8640E-02	3.6063E-02	3.0021E-02

(b) Capture cross section for uranium-238

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup cross section, b				
1	9.6112E 02	7.0375E-01	6.0423E-01	5.8051E-01	5.4716E-01	5.1766E-01
2	7.4852E 02	8.1351E-01	6.9378E-01	6.6975E-01	6.2852E-01	5.9208E-01
3	5.8295E 02	7.5009E-01	6.4366E-01	6.1890E-01	5.8447E-01	5.5475E-01
4	4.5400E 02	7.6233E-01	6.4887E-01	6.2223E-01	5.8478E-01	5.5141E-01
5	3.5358E 02	6.6728E-01	5.6033E-01	5.3592E-01	5.0252E-01	4.7417E-01
6	2.7536E 02	6.4380E-01	5.5720E-01	5.3744E-01	5.1008E-01	4.8557E-01
7	2.1445E 02	7.3625E-01	6.2582E-01	6.0125E-01	5.6849E-01	5.4320E-01
8	1.6702E 02	1.3655E 00	1.2108E 00	1.1728E 00	1.1189E 00	1.0784E 00
9	1.3007E 02	6.6800E-01	5.4454E-01	5.1553E-01	4.7525E-01	4.3861E-01
10	1.0130E 02	2.4717E 00	2.0360E 00	1.9197E 00	1.7355E 00	1.5259E 00
11	7.8893E 01	1.2361E 00	1.0834E 00	1.0433E 00	1.0003E 00	9.6443E-01
12	6.1442E 01	2.2430E 00	1.8221E 00	1.7156E 00	1.5644E 00	1.4431E 00
13	4.7851E 01	7.9976E-02	7.9295E-02	7.8890E-02	7.7731E-02	7.4757E-02
14	3.7266E 01	1.4659E 00	1.2395E 00	1.1598E 00	1.0511E 00	9.3707E-01
15	2.9023E 01	4.6275E 00	3.4337E 00	3.1208E 00	2.6448E 00	2.1835E 00
16	2.2603E 01	6.6963E-01	6.5575E-01	6.5134E-01	6.4042E-01	6.2516E-01
17	1.7603E 01	7.9241E 00	6.2434E 00	5.8143E 00	5.1873E 00	4.6441E 00
18	1.3710E 01	3.7405E-01	3.7256E-01	3.7163E-01	3.6921E-01	3.6296E-01
19	1.0677E 01	1.7505E-01	1.7503E-01	1.7503E-01	1.7505E-01	1.7512E-01
20	8.3153E 00	6.4146E-01	6.3125E-01	6.2622E-01	6.1471E-01	5.9563E-01
21	6.4760E 00	1.2019E 01	9.1337E 00	8.4349E 00	7.4252E 00	6.4551E 00
22	5.0435E 00	7.1244E 00	6.0797E 00	5.7353E 00	5.3340E 00	4.8912E 00
23	3.9279E 00	1.1678E 00	1.1591E 00	1.1548E 00	1.1442E 00	1.1236E 00
24	3.0590E 00	6.5513E-01	6.5487E-01	6.5473E-01	6.5435E-01	6.5344E-01
25	2.3824E 00	5.1687E-01	5.1683E-01	5.1683E-01	5.1671E-01	5.1646E-01
26	1.8554E 00	4.6942E-01	4.6942E-01	4.6942E-01	4.6942E-01	4.6940E-01
27	1.4450E 00	4.5999E-01	4.5999E-01	4.5999E-01	4.5999E-01	4.5999E-01
28	1.1254E 00	4.7078E-01	4.7074E-01	4.7073E-01	4.7069E-01	4.7060E-01
29	8.7640E-01	4.9744E-01	4.9752E-01	4.9755E-01	4.9766E-01	4.9783E-01
30	6.8260E-01	5.3461E-01	5.3460E-01	5.3459E-01	5.3459E-01	5.3459E-01
31	5.3160E-01	5.8222E-01	5.8217E-01	5.8215E-01	5.8209E-01	5.8195E-01
32	4.1400E-01	6.4026E-01	6.4017E-01	6.4012E-01	6.3999E-01	6.3969E-01

TABLE IV. - Continued. MULTIGROUP FLUXES AND CROSS SECTIONS FOR SLABS OF DEPLETED URANIUM SURROUNDED BY LITHIUM HYDRIDE

(c) Scatter cross section for uranium-238

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup cross section, b				
1	9.6112E 02	1.2136E 01	1.1996E 01	1.1955E 01	1.1824E 01	1.1047E 01
2	7.4852E 02	1.1217E 01	1.0848E 01	1.0748E 01	1.0583E 01	1.0388E 01
3	5.8295E 02	1.1794E 01	1.1476E 01	1.1387E 01	1.1242E 01	1.1076E 01
4	4.5400E 02	1.1081E 01	1.0924E 01	1.0884E 01	1.0823E 01	1.0763E 01
5	3.5358E 02	1.1486E 01	1.1432E 01	1.1420E 01	1.1403E 01	1.1387E 01
6	2.7536E 02	1.1249E 01	1.1021E 01	1.0957E 01	1.0850E 01	1.0720E 01
7	2.1445E 02	1.1454E 01	1.1290E 01	1.1249E 01	1.1189E 01	1.1126E 01
8	1.6702E 02	1.3063E 01	1.2014E 01	1.1718E 01	1.1239E 01	1.0723E 01
9	1.3007E 02	1.0925E 01	1.0920E 01	1.0921E 01	1.0925E 01	1.0934E 01
10	1.0130E 02	1.7526E 01	1.6626E 01	1.6389E 01	1.6007E 01	1.5538E 01
11	7.8893E 01	7.8742E 00	7.8950E 00	7.9117E 00	7.9581E 00	8.0626E 00
12	6.1442E 01	1.3395E 01	1.3160E 01	1.3138E 01	1.3169E 01	1.3353E 01
13	4.7851E 01	9.8066E 00	9.8168E 00	9.8232E 00	9.8421E 00	9.8936E 00
14	3.7266E 01	1.8713E 01	1.7984E 01	1.7745E 01	1.7317E 01	1.6765E 01
15	2.9023E 01	7.8140E 00	7.0582E 00	6.9218E 00	6.7605E 00	6.7266E 00
16	2.2603E 01	1.2564E 01	1.2505E 01	1.2473E 01	1.2418E 01	1.2325E 01
17	1.7603E 01	1.1147E 01	1.0531E 01	1.0520E 01	1.0415E 01	1.0515E 01
18	1.3710E 01	9.0690E 00	9.0728E 00	9.0752E 00	9.0825E 00	9.1023E 00
19	1.0677E 01	1.0867E 01	1.0867E 01	1.0867E 01	1.0867E 01	1.0867E 01
20	8.3153E 00	1.2089E 01	1.2077E 01	1.2071E 01	1.2058E 01	1.2035E 01
21	6.4760E 00	1.5277E 01	1.4877E 01	1.4765E 01	1.4595E 01	1.4417E 01
22	5.0435E 00	7.6783E 00	7.8580E 00	7.9148E 00	8.0090E 00	8.1109E 00
23	3.9279E 00	9.4391E 00	9.4457E 00	9.4490E 00	9.4570E 00	9.4727E 00
24	3.0590E 00	9.8850E 00	9.8853E 00	9.8855E 00	9.8859E 00	9.8870E 00
25	2.3824E 00	1.0355E 01	1.0355E 01	1.0355E 01	1.0355E 01	1.0359E 01
26	1.8554E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
27	1.4450E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
28	1.1254E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
29	8.7640E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
30	6.8260E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
31	5.3160E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
32	4.1400E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01

(d) Capture cross section for uranium-235

1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	0.	0.	0.	0.	0.
6	2.7536E 02	0.	0.	0.	0.	0.
7	2.1445E 02	0.	0.	0.	0.	0.
8	1.6702E 02	0.	0.	0.	0.	0.
9	1.3007E 02	6.1293E 00	6.2836E 00	6.3569E 00	6.5284E 00	6.8504E 00
10	1.0130E 02	6.9086E 00	6.8524E 00	6.8047E 00	6.6518E 00	6.2826E 00
11	7.8893E 01	1.3894E 01	1.4137E 01	1.4240E 01	1.4443E 01	1.4645E 01
12	6.1442E 01	1.2754E 01	1.3075E 01	1.3139E 01	1.3376E 01	1.3537E 01
13	4.7851E 01	2.3682E 01	2.3670E 01	2.3682E 01	2.3740E 01	2.3903E 01
14	3.7266E 01	2.3882E 01	2.3824E 01	2.3743E 01	2.3501E 01	2.3025E 01
15	2.9023E 01	4.3927E 01	4.2644E 01	4.1983E 01	4.0454E 01	3.7778E 01
16	2.2603E 01	3.4460E 01	3.3930E 01	3.3704E 01	3.3232E 01	3.2546E 01
17	1.7603E 01	4.1830E 01	4.1106E 01	4.0568E 01	3.9106E 01	3.6276E 01
18	1.3710E 01	2.8509E 01	2.8530E 01	2.8554E 01	2.8639E 01	2.8871E 01
19	1.0677E 01	8.8697E 01	8.7057E 01	8.6474E 01	8.5460E 01	8.4417E 01
20	8.3153E 00	7.0943E 01	6.7456E 01	6.6047E 01	6.3239E 01	5.9270E 01
21	6.4760E 00	1.3778E 01	1.2326E 01	1.1933E 01	1.1359E 01	1.0830E 01
22	5.0435E 00	2.2477E 01	1.8252E 01	1.7160E 01	1.5577E 01	1.4123E 01
23	3.9279E 00	4.4112E 01	4.3073E 01	4.2555E 01	4.1301E 01	3.8863E 01
24	3.0590E 00	2.5876E 01	2.5774E 01	2.5730E 01	2.5640E 01	2.5507E 01
25	2.3824E 00	4.3188E 00	4.3137E 00	4.3100E 00	4.2985E 00	4.2665E 00
26	1.8554E 00	1.8155E 01	1.8105E 01	1.8084E 01	1.8046E 01	1.8008E 01
27	1.4450E 00	2.0142E 00	2.0141E 00	2.0140E 00	2.0139E 00	2.0139E 00
28	1.1254E 00	1.2806E 01	1.2759E 01	1.2735E 01	1.2676E 01	1.2554E 01
29	8.7640E-01	1.5894E 01	1.5824E 01	1.5790E 01	1.5711E 01	1.5571E 01
30	6.8260E-01	3.0458E 00	3.0462E 00	3.0463E 00	3.0466E 00	3.0467E 00
31	5.3160E-01	2.6783E 00	2.6777E 00	2.6774E 00	2.6757E 00	2.6751E 00
32	4.1400E-01	4.9333E 00	4.9277E 00	4.9248E 00	4.9170E 00	4.8993E 00

TABLE IV. - Concluded. MULTIGROUP FLUXES AND CROSS SECTIONS FOR SLABS OF DEPLETED URANIUM SURROUNDED BY LITHIUM HYDRIDE

(e) Scatter cross section for uranium-235

Group	Lower energy of group, eV	Absorber thickness, cm				
		1.0	2.0	2.54	4.0	8.0
		Multigroup cross section, b				
1	9.6112E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
2	7.4852E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
3	5.8295E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
4	4.5400E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
5	3.5358E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
6	2.7536E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
7	2.1445E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
8	1.6702E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
9	1.3007E 02	1.1376E 01	1.1396E 01	1.1405E 01	1.1425E 01	1.1456E 01
10	1.0130E 02	1.0879E 01	1.0853E 01	1.0840E 01	1.0807E 01	1.0744E 01
11	7.8893E 01	1.1605E 01	1.1634E 01	1.1647E 01	1.1671E 01	1.1697E 01
12	6.1442E 01	1.1149E 01	1.1165E 01	1.1171E 01	1.1180E 01	1.1184E 01
13	4.7851E 01	1.1781E 01	1.1773E 01	1.1769E 01	1.1758E 01	1.1723E 01
14	3.7266E 01	1.1666E 01	1.1615E 01	1.1591E 01	1.1539E 01	1.1455E 01
15	2.9023E 01	1.1696E 01	1.1417E 01	1.1312E 01	1.1111E 01	1.0845E 01
16	2.2603E 01	1.1445E 01	1.1440E 01	1.1437E 01	1.1429E 01	1.1415E 01
17	1.7603E 01	1.2354E 01	1.2134E 01	1.2035E 01	1.1829E 01	1.1532E 01
18	1.3710E 01	1.0790E 01	1.0795E 01	1.0797E 01	1.0804E 01	1.0818E 01
19	1.0677E 01	1.2422E 01	1.2406E 01	1.2404E 01	1.2406E 01	1.2423E 01
20	8.3153E 00	1.3274E 01	1.3227E 01	1.3214E 01	1.3194E 01	1.3173E 01
21	6.4760E 00	9.0445E 00	8.9522E 00	8.9203E 00	8.8650E 00	8.7994E 00
22	5.0435E 00	9.7544E 00	9.7903E 00	9.8053E 00	9.8330E 00	9.8655E 00
23	3.9279E 00	9.8550E 00	9.8620E 00	9.8655E 00	9.8739E 00	9.8902E 00
24	3.0590E 00	1.0195E 01	1.0195E 01	1.0194E 01	1.0194E 01	1.0192E 01
25	2.3824E 00	9.9807E 00	9.9809E 00	9.9811E 00	9.9815E 00	9.9825E 00
26	1.8554E 00	1.0250E 01	1.0250E 01	1.0250E 01	1.0250E 01	1.0250E 01
27	1.4450E 00	1.0262E 01	1.0262E 01	1.0262E 01	1.0262E 01	1.0262E 01
28	1.1254E 00	1.0407E 01	1.0407E 01	1.0407E 01	1.0407E 01	1.0407E 01
29	8.7640E-01	1.0179E 01	1.0179E 01	1.0179E 01	1.0178E 01	1.0178E 01
30	6.8260E-01	1.0205E 01	1.0205E 01	1.0205E 01	1.0205E 01	1.0205E 01
31	5.3160E-01	1.0269E 01	1.0269E 01	1.0269E 01	1.0269E 01	1.0269E 01
32	4.1400E-01	1.0320E 01	1.0320E 01	1.0320E 01	1.0320E 01	1.0320E 01

(f) Fission cross section for uranium-235

1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	0.	0.	0.	0.	0.
6	2.7536E 02	0.	0.	0.	0.	0.
7	2.1445E 02	0.	0.	0.	0.	0.
8	1.6702E 02	0.	0.	0.	0.	0.
9	1.3007E 02	4.8628E 00	4.9869E 00	5.0459E 00	5.1824E 00	5.4312E 00
10	1.0130E 02	5.2378E 00	5.2350E 00	5.2329E 00	5.2167E 00	5.1552E 00
11	7.8893E 01	6.2329E 00	6.1940E 00	6.1869E 00	6.1843E 00	6.1950E 00
12	6.1442E 01	1.2680E 01	1.3137E 01	1.3306E 01	1.3602E 01	1.3932E 01
13	4.7851E 01	2.8823E 01	2.8711E 01	2.8674E 01	2.8607E 01	2.8424E 01
14	3.7266E 01	1.9995E 01	1.9597E 01	1.9401E 01	1.8975E 01	1.8308E 01
15	2.9023E 01	5.2336E 01	4.8932E 01	4.7450E 01	4.4362E 01	3.9684E 01
16	2.2603E 01	3.4432E 01	3.4180E 01	3.4055E 01	3.3810E 01	3.3414E 01
17	1.7603E 01	6.1745E 01	5.1423E 01	6.0915E 01	5.9320E 01	5.5875E 01
18	1.3710E 01	2.9139E 01	2.9143E 01	2.9155E 01	2.9206E 01	2.9354E 01
19	1.0677E 01	3.4480E 01	3.3772E 01	3.3557E 01	3.3277E 01	3.3223E 01
20	8.3153E 00	1.2719E 02	1.2088E 02	1.1832E 02	1.1320E 02	1.0591E 02
21	6.4760E 00	1.5397E 01	1.4787E 01	1.4548E 01	1.4086E 01	1.4413E 01
22	5.0435E 00	1.1293E 01	9.7640E 00	9.3114E 00	8.5858E 00	7.8278E 00
23	3.9279E 00	6.5656E 00	5.4583E 00	6.4350E 00	6.2757E 00	6.0243E 00
24	3.0590E 00	3.3402E 01	3.3317E 01	3.3284E 01	3.3224E 01	3.3167E 01
25	2.3824E 00	1.0404E 01	1.0395E 01	1.0387E 01	1.0362E 01	1.0288E 01
26	1.8554E 00	6.4430E 00	6.4295E 00	6.4240E 00	6.4134E 00	6.4029E 00
27	1.4450E 00	3.4372E 00	3.4373E 00	3.4374E 00	3.4380E 00	3.4406E 00
28	1.1254E 00	3.4010E 01	3.3882E 01	3.3816E 01	3.3653E 01	3.3318E 01
29	8.7640E-01	4.2559E 01	4.2369E 01	4.2276E 01	4.2058E 01	4.1675E 01
30	6.8260E-01	7.3912E 00	7.3923E 00	7.3927E 00	7.3934E 00	7.3936E 00
31	5.3160E-01	6.4067E 00	6.4052E 00	6.4044E 00	6.4023E 00	6.3979E 00
32	4.1400E-01	1.2792E 01	1.2775E 01	1.2767E 01	1.2745E 01	1.2695E 01

TABLE V. - CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

```
      DIMENSION  A(12), E(32), F(32,5), AB(32,5,5), SC(32,5,5),
     1           NAM(5), THICK(5), ABUND(5), ABS(32,5), SCT(32,5),
     2   IGRP(32), BRABS(32,5), BRSCT(32,5)
      DATA THICK/6H  1 CM,6H  2 CM,6H2.54CM,6H  4 CM,6H  8 CM/
      DATA NAM/6H W-180,6H W-182,6H W-183,6H W-184,6H W-186/
C     MANIPULATE GAROL RESONANCE CROSS SECTIONS (GAM-II GROUP SPLIT)
C        FOR FULLY DENSE NATURAL TUNGSTEN
C     E(I) IS LOWER ENERGY GROUP BOUND
C     F(I) IS BROAD GROUP FLUX IN ITH GROUP
C     AB(I,J,K) = CAPTURE CROSS SECTION .. ITH GROUP, JTH MATL, KTH CASE
C     SC(I,J,K) = SCATTER CROSS SECTION .. ITH GROUP, JTH MATL, KTH CASE
  500 FORMAT(6E12.4)
  501 FORMAT(12A6)
  600 FORMAT( I5, 1P7E12.4)
  602 FORMAT(1H1/ 1H0/ 12A6)
  603 FORMAT(1H0,/18H0  FLUXES BY CASE  //
     1       17H     I  LOW ENERGY, 5(10H      CASE I2)/17X,5(6X,A6))
  604 FORMAT(1H0,/44H0      CAPTURE CROSS-SECTIONS, BARNS,  MATL  A6//
     1       17H     I  LOW ENERGY, 5(10H      CASE I2)/17X,5(6X,A6))
  605 FORMAT(1H0,/44H0      SCATTER CROSS-SECTIONS, BARNS,  MATL  A6//
     1       17H     I  LOW ENERGY, 5(10H      CASE I2)/17X,5(6X,A6))
  606 FORMAT(1H0,/49H0  CAPTURE CROSS SECTION, BARNS, NATURAL TUNGSTEN//
     1       17H     I  LOW ENERGY, 5(10H      CASE I2)/17X,5(6X,A6))
  607 FORMAT(1H0,/49H0  SCATTER CROSS SECTION, BARNS, NATURAL TUNGSTEN//
     1       17H     I  LOW ENERGY, 5(10H      CASE I2)/17X,5(6X,A6))
      READ(5,500) E
    1 READ(5,501) A
      DO 15 MCASE = 1,5
      READ(5,500) (F(I,MCASE), I=1,32)
      DO 5 M=1,5
      READ(5,500) ( AB(I,M,MCASE), I=1,32)
    5 READ(5,500) ( SC(I,M,MCASE), I=1,32)
   15 CONTINUE
      WRITE(6,602) A
      WRITE(6,603)     (MC,MC=1,5),(THICK(MC),MC=1,5)
      DO 20 I=1,32
   20 WRITE(6,600) I,E(I),(F(I,MC), MC=1,5)
      DO 35 M=1,5
      WRITE(6,602) A
      WRITE(6,604) NAM(M), (MC,MC=1,5),(THICK(MC),MC=1,5)
      DO 25 I=1,32
   25 WRITE(6,600) I,E(I), (AB(I,M, MC),MC=1,5)
      WRITE(6,602) A
      WRITE(6,605) NAM(M), (MC,MC=1,5),(THICK(MC),MC=1,5)
      DO 30 I=1,32
   30 WRITE(6,600) I,E(I), (SC(I,M,MC),MC=1,5)
   35 CONTINUE
C     MIX NATURAL TUNGSTEN
      ABUND(1)= 0.0014
      ABUND(2)= 0.2641
      ABUND(3)= 0.1440
      ABUND(4)= 0.3064
      ABUND(5)= 0.2841
      DO 36 MC=1,5
      DO 36 I=1,32
      ABS(I,MC)=0.0
      SCT(I,MC)=0.0
      DO 36 MT=1,5
      ABS(I,MC)=ABS(I,MC) + ABUND(MT)*AB(I,MT,MC)
   36 SCT(I,MC)=SCT(I,MC) + ABUND(MT)*SC(I,MT,MC)
      WRITE(6,602) A
      WRITE(6,606)     (MC,MC=1,5),(THICK(MC),MC=1,5)
      DO 37 I=1,32
   37 WRITE(6,600) I,E(I), (ABS(I,MC), MC=1,5)
      WRITE(6,602) A
      WRITE(6,607)     (MC,MC=1,5),(THICK(MC),MC=1,5)
      DO 39 I=1,32
   39 WRITE(6,600) I,E(I), (SCT(I,MC), MC=1,5)
C     FEW GROUP AVERAGE
      READ(5,505) NBG,IGRP
  505 FORMAT(36I2)
C     NBG IS THE NUMBER OF BROAD GROUPS CONSIDERED
C     IGRP(N)= NO. OF THE 32 FINE GRPS IN EACH BROAD GROUP
C     I.E.  IF THE FIRST BROAD GROUP IS TO CONTAIN THE FIRST THREE
C     GROUPS OF THE ORIGINAL 32,  THEN IGRP(1)=3,  ET CETERA
      WRITE(6,618)  (MC,MC=1,5),  (THICK(MC),MC=1,5)
  618 FORMAT(1H1/52H0BROAD GROUP AVERAGED CAPTURE/SCATTER CROSS SECTION
     1   /27H0BG NO.     CONTAINS GROUPS     ,
     2  5(10H      CASE I2)  /  27X, 5(6X,A6))
      ILOW=1
      DO 75 N=1,NBG
      IHIGH=ILOW+IGRP(N)-1
      IF(IHIGH.GT.32)  CALL EXIT
      DO 50 MC=1,5
      FF=0.0
      C=0.0
      S=0.0
      DO 45 I=ILOW,IHIGH
      FF=FF+F(I,MC)
      C=C+ABS(I,MC)*F(I,MC)
    5 S=S+SCT(I,MC)*F(I,MC)
      BRABS(N,MC)=C/FF
   50 BRSCT(N,MC)=S/FF
      WRITE(6,609)N,ILOW,IHIGH,(BRABS(N,MC),MC=1,5),(BRSCT(N,MC),MC=1,5)
  609 FORMAT(1H0,I6,I10,2X,24TO,I3,3X,  1P5E12.4/ 27X,1P5E12.4)
   75 ILOW=IHIGH+1
      GO TO 1
      END
```

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

FLUXES BY CASE

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	2.1656E-01	2.0256E-01	1.9700E-01	1.8512E-01	1.6272E-01
2	7.4852E 02	2.3908E-01	2.2471E-01	2.1841E-01	2.0475E-01	1.7968E-01
3	5.8295E 02	2.3263E-01	2.2033E-01	2.1454E-01	2.0020E-01	1.6784E-01
4	4.5400E 02	2.3792E-01	2.2786E-01	2.2281E-01	2.0985E-01	1.7965E-01
5	3.5358E 02	2.2134E-01	2.0525E-01	1.9803E-01	1.8158E-01	1.4978E-01
6	2.7536E 02	2.0038E-01	1.7504E-01	1.6402E-01	1.4005E-01	9.9950E-02
7	2.1445E 02	1.7297E-01	1.4038E-01	1.2733E-01	1.0144E-01	6.5059E-02
8	1.6702E 02	1.8390E-01	1.4982E-01	1.3632E-01	1.0942E-01	7.0545E-02
9	1.3007E 02	2.0609E-01	1.8259E-01	1.7135E-01	1.4775E-01	1.0407E-01
10	1.0130E 02	1.8744E-01	1.6277E-01	1.5237E-01	1.2985E-01	9.1644E-02
11	7.8893E 01	2.2959E-01	2.1397E-01	2.0613E-01	1.8665E-01	1.4528E-01
12	6.1442E 01	2.3640E-01	2.2715E-01	2.2266E-01	2.1144E-01	1.8423E-01
13	4.7851E 01	2.1473E-01	1.9926E-01	1.9214E-01	1.7533E-01	1.4200E-01
14	3.7266E 01	1.4581E-01	1.0870E-01	9.5122E-02	7.0652E-02	4.1260E-02
15	2.9023E 01	2.1507E-01	1.8630E-01	1.7271E-01	1.4280E-01	9.5041E-02
16	2.2603E 01	9.0212E-02	5.7404E-02	4.8472E-02	3.4637E-02	1.9943E-02
17	1.7603E 01	1.4626E-02	8.1523E-03	6.5897E-03	4.3453E-03	2.2504E-03
18	1.3710E 01	1.0140E-01	6.1223E-02	5.0354E-02	3.4017E-02	1.7995E-02
19	1.0677E 01	1.8128E-01	1.3664E-01	1.1957E-01	8.8571E-02	5.1306E-02
20	8.3153E 00	1.9282E-01	1.5540E-01	1.3963E-01	1.0818E-01	6.5550E-02
21	6.4760E 00	1.1670E-01	8.2257E-02	7.0615E-02	5.0576E-02	2.7977E-02
22	5.0435E 00	1.8363E-01	1.4458E-01	1.2879E-01	9.8043E-02	5.7685E-02
23	3.9279E 00	6.3510E-02	4.0633E-02	3.3900E-02	2.3270E-02	1.2429E-02
24	3.0590E 00	1.1689E-01	7.7650E-02	6.5284E-02	4.5089E-02	2.3925E-02
25	2.3824E 00	1.8096E-01	1.4142E-01	1.2563E-01	9.5105E-02	5.5218E-02
26	1.8554E 00	1.9484E-01	1.5860E-01	1.4327E-01	1.1205E-01	6.7843E-02
27	1.4450E 00	1.9581E-01	1.6087E-01	1.4590E-01	1.1507E-01	7.0522E-02
28	1.1254E 00	1.9547E-01	1.6013E-01	1.4505E-01	1.1413E-01	6.9756E-02
29	8.7640E-01	1.9477E-01	1.5814E-01	1.4272E-01	1.1143E-01	6.7401E-02
30	6.8260E-01	1.9164E-01	1.5375E-01	1.3805E-01	1.0668E-01	6.3658E-02
31	5.3160E-01	1.8673E-01	1.4770E-01	1.3132E-01	1.0067E-01	5.9189E-02
32	4.1400E-01	1.8299E-01	1.4222E-01	1.2602E-01	9.4897E-02	5.4881E-02

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

CAPTURE CROSS-SECTIONS, BARNS, MATL W-180

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	0.	0.	0.	0.	0.
6	2.7536E 02	0.	0.	0.	0.	0.
7	2.1445E 02	0.	0.	0.	0.	0.
8	1.6702E 02	0.	0.	0.	0.	0.
9	1.3007E 02	0.	0.	0.	0.	0.
10	1.0130E 02	6.9194E-04	5.8937E-04	5.6153E-04	5.2173E-04	4.8643E-04
11	7.8893E 01	1.4736E 01	1.4513E 01	1.4481E 01	1.4529E 01	1.4825E 01
12	6.1442E 01	6.9286E 01	6.7181E 01	6.6641E 01	6.5912E 01	6.4988E 01
13	4.7851E 01	3.0098E 01	2.6134E 01	2.4881E 01	2.2876E 01	2.0797E 01
14	3.7266E 01	1.5894E-01	1.4794E-01	1.4544E-01	1.4238E-01	1.4108E-01
15	2.9023E 01	4.3568E-02	4.3689E-02	4.3599E-02	4.3659E-02	4.3519E-02
16	2.2603E 01	9.6186E-02	9.1905E-02	9.0144E-02	8.6683E-02	8.2012E-02
17	1.7603E 01	1.7374E 00	1.6418E 00	1.6198E 00	1.5888E 00	1.5506E 00
18	1.3710E 01	6.1672E 02	5.6904E 02	5.5764E 02	5.4137E 02	5.2625E 02
19	1.0677E 01	2.9591E 00	2.8859E 00	2.8511E 00	2.8226E 00	2.7842E 00
20	8.3153E 00	1.0259E 00	1.0271E 00	1.0273E 00	1.0276E 00	1.0280E 00
21	6.4760E 00	6.4001E-01	6.3729E-01	6.3655E-01	6.3557E-01	6.3513E-01
22	5.0435E 00	5.2735E-01	5.2790E-01	5.2810E-01	5.2844E-01	5.2874E-01
23	3.9279E 00	4.8274E-01	4.8350E-01	4.8370E-01	4.8398E-01	4.8421E-01
24	3.0590E 00	4.5944E-01	4.5937E-01	4.5936E-01	4.5934E-01	4.5933E-01
25	2.3824E 00	4.6566E-01	4.6578E-01	4.6583E-01	4.6593E-01	4.6604E-01
26	1.8554E 00	4.8715E-01	4.8727E-01	4.8732E-01	4.8743E-01	4.8758E-01
27	1.4450E 00	5.1588E-01	5.1588E-01	5.1589E-01	5.1589E-01	5.1589E-01
28	1.1254E 00	5.5828E-01	5.5825E-01	5.5824E-01	5.5821E-01	5.5817E-01
29	8.7640E-01	6.1354E-01	6.1340E-01	6.1334E-01	6.1321E-01	6.1304E-01
30	6.8260E-01	6.7658E-01	6.7636E-01	6.7626E-01	6.7607E-01	6.7582E-01
31	5.3160E-01	7.4737E-01	7.4719E-01	7.4711E-01	7.4696E-01	7.4678E-01
32	4.1400E-01	8.3721E-01	8.3681E-01	8.3665E-01	8.3633E-01	8.3595E-01

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

SCATTER CROSS-SECTIONS, BARNS, MATL W-180

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
2	7.4852E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
3	5.8295E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
4	4.5400E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
5	3.5358E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
6	2.7536E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
7	2.1445E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
8	1.6702E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
9	1.3007E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
10	1.0130E 02	9.0538E 00	9.0518E 00	9.0512E 00	9.0505E 00	9.0498E 00
11	7.8893E 01	1.2567E 01	1.2601E 01	1.2626E 01	1.2695E 01	1.2834E 01
12	6.1442E 01	4.3280E 01	4.2247E 01	4.2034E 01	4.1827E 01	4.1545E 01
13	4.7851E 01	1.2071E 01	1.2489E 01	1.2364E 01	1.2163E 01	1.1953E 01
14	3.7266E 01	8.4355E 00	8.4566E 00	8.4519E 00	8.4691E 00	8.4739E 00
15	2.9023E 01	9.0229E 00	9.0233E 00	9.0235E 00	9.0242E 00	9.0251E 00
16	2.2603E 01	9.3411E 00	9.3210E 00	9.3128E 00	9.2967E 00	9.2749E 00
17	1.7603E 01	1.2777E 01	1.2575E 01	1.2652E 01	1.2619E 01	1.2589E 01
18	1.3710E 01	1.3078E 02	1.2015E 02	1.1763E 02	1.1405E 02	1.1073E 02
19	1.0677E 01	5.2894E 00	5.3311E 00	5.3455E 00	5.3680E 00	5.3907E 00
20	8.3153E 00	7.0138E 00	7.0018E 00	6.9979E 00	6.9915E 00	6.9844E 00
21	6.4760E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
22	5.0435E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
23	3.9279E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
24	3.0590E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
25	2.3824E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
26	1.8554E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
27	1.4450E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
28	1.1254E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
29	8.7640E-01	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
30	6.8260E-01	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
31	5.3160E-01	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
32	4.1400E-01	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

CAPTURE CROSS-SECTIONS, BARNS, MATL W-182

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	6.2569E-01	5.4562E-01	5.2748E-01	5.0053E-01	4.7711E-01
2	7.4852E 02	1.5625E 00	1.3849E 00	1.3368E 00	1.2584E 00	1.1653E 00
3	5.8295E 02	6.4400E-01	5.6430E-01	5.4379E-01	5.1235E-01	4.7726E-01
4	4.5400E 02	8.8842E-01	7.6009E-01	7.2637E-01	6.7791E-01	6.3451E-01
5	3.5358E 02	1.4654E 00	1.2677E 00	1.2203E 00	1.1532E 00	1.0954E 00
6	2.7536E 02	9.8142E-01	8.7993E-01	8.5455E-01	8.2127E-01	8.0048E-01
7	2.1445E 02	2.9124E 00	2.5442E 00	2.4575E 00	2.3387E 00	2.2375E 00
8	1.6702E 02	1.1339E 00	1.0182E 00	9.8755E-01	9.4343E-01	9.0412E-01
9	1.3007E 02	7.6605E-01	7.2825E-01	7.1914E-01	7.0842E-01	7.0647E-01
10	1.0130E 02	7.5791E 00	6.4420E 00	6.1487E 00	5.7208E 00	5.3403E 00
11	7.8893E 01	2.6732E-01	2.5805E-01	2.5400E-01	2.4533E-01	2.3156E-01
12	6.1442E 01	8.5470E-02	8.5747E-02	8.5865E-02	8.6090E-02	8.6250E-02
13	4.7851E 01	5.7707E-02	5.7855E-02	5.7899E-02	5.7963E-02	5.8025E-02
14	3.7266E 01	4.7333E-02	4.7238E-02	4.7211E-02	4.7170E-02	4.7136E-02
15	2.9023E 01	8.2644E-02	7.9945E-02	7.9260E-02	7.8456E-02	7.8145E-02
16	2.2603E 01	7.2070E 00	6.8053E 00	6.6417E 00	6.3257E 00	5.9056E 00
17	1.7603E 01	2.1547E 02	2.1103E 02	2.1002E 02	2.0860E 02	2.0731E 02
18	1.3710E 01	3.0633E 00	2.9750E 00	2.9550E 00	2.9269E 00	2.9015E 00
19	1.0677E 01	1.4502E 00	1.4384E 00	1.4343E 00	1.4279E 00	1.4215E 00
20	8.3153E 00	9.9898E-01	9.9892E-01	9.9885E-01	9.9867E-01	9.9852E-01
21	6.4760E 00	1.9709E 00	1.9982E 00	2.0053E 00	2.0181E 00	2.0267E 00
22	5.0435E 00	6.5284E 00	6.4170E 00	6.3754E 00	6.3070E 00	6.2399E 00
23	3.9279E 00	9.5300E 01	8.1298E 01	7.8317E 01	7.4490E 01	7.1429E 01
24	3.0590E 00	3.5659E 01	3.2691E 01	3.1955E 01	3.0980E 01	3.0281E 01
25	2.3824E 00	8.6667E 00	8.5862E 00	8.5542E 00	8.4960E 00	8.4260E 00
26	1.8554E 00	5.1584E 00	5.1508E 00	5.1475E 00	5.1406E 00	5.1309E 00
27	1.4450E 00	4.1087E 00	4.1087E 00	4.1087E 00	4.1086E 00	4.1085E 00
28	1.1254E 00	3.7636E 00	3.7637E 00	3.7638E 00	3.7639E 00	3.7640E 00
29	8.7640E-01	3.7124E 00	3.7123E 00	3.7123E 00	3.7122E 00	3.7121E 00
30	6.8260E-01	3.8149E 00	3.8143E 00	3.8141E 00	3.8137E 00	3.8131E 00
31	5.3160E-01	4.0165E 00	4.0159E 00	4.0157E 00	4.0152E 00	4.0146E 00
32	4.1400E-01	4.3389E 00	4.3374E 00	4.3368E 00	4.3356E 00	4.3341E 00

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

SCATTER CROSS-SECTIONS, BARNS, MATL W-182

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.9062E 01	1.7774E 01	1.7441E 01	1.6954E 01	1.6523E 01
2	7.4852E 02	1.4042E 01	1.2060E 01	1.1532E 01	1.0695E 01	9.7551E 00
3	5.8295E 02	1.1153E 01	1.0803E 01	1.0730E 01	1.0534E 01	1.0376E 01
4	4.5400E 02	1.3526E 01	1.2411E 01	1.2135E 01	1.1746E 01	1.1411E 01
5	3.5358E 02	1.2449E 01	1.1790E 01	1.1650E 01	1.1489E 01	1.1438E 01
6	2.7536E 02	1.5682E 01	1.5570E 01	1.5528E 01	1.5448E 01	1.5327E 01
7	2.1445E 02	4.8238E 01	4.2830E 01	4.1616E 01	4.0029E 01	3.8870E 01
8	1.6702E 02	3.9225E 00	3.8799E 00	3.8553E 00	3.8462E 00	3.8251E 00
9	1.3007E 02	1.1456E 01	1.1465E 01	1.1468E 01	1.1477E 01	1.1509E 01
10	1.0130E 02	3.7674E 01	3.3180E 01	3.2101E 01	3.0638E 01	2.9550E 01
11	7.8893E 01	6.1548E 00	6.2516E 00	6.3090E 00	6.4149E 00	6.6021E 00
12	6.1442E 01	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00
13	4.7851E 01	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00
14	3.7266E 01	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00
15	2.9023E 01	9.3102E 00	9.2938E 00	9.2897E 00	9.2848E 00	9.2830E 00
16	2.2603E 01	2.6870E 01	2.6139E 01	2.5844E 01	2.5277E 01	2.4528E 01
17	1.7603E 01	1.8712E 02	1.8602E 02	1.8577E 02	1.8543E 02	1.8511E 02
18	1.3710E 01	2.8968E 00	2.9638E 00	2.9792E 00	3.0009E 00	3.0208E 00
19	1.0677E 01	7.8946E 00	7.9702E 00	7.9955E 00	8.0345E 00	8.0734E 00
20	8.3153E 00	9.0957E 00	9.0947E 00	9.0944E 00	9.0938E 00	9.0932E 00
21	6.4760E 00	1.0332E 01	1.0347E 01	1.0351E 01	1.0357E 01	1.0361E 01
22	5.0435E 00	1.1723E 01	1.1698E 01	1.1689E 01	1.1674E 01	1.1663E 01
23	3.9279E 00	1.7718E 01	1.7221E 01	1.7104E 01	1.6949E 01	1.6821E 01
24	3.0590E 00	4.7381E 00	4.8711E 00	4.9070E 00	4.9570E 00	4.9944E 00
25	2.3824E 00	6.7595E 00	6.7716E 00	6.7754E 00	6.7851E 00	6.7955E 00
26	1.8554E 00	7.4192E 00	7.4211E 00	7.4219E 00	7.4236E 00	7.4260E 00
27	1.4450E 00	7.7158E 00	7.7159E 00	7.7159E 00	7.7159E 00	7.7159E 00
28	1.1254E 00	7.8835E 00	7.8834E 00	7.8833E 00	7.8832E 00	7.8831E 00
29	8.7640E-01	7.9891E 00	7.9888E 00	7.9888E 00	7.9886E 00	7.9883E 00
30	6.8260E-01	8.0578E 00	8.0576E 00	8.0575E 00	8.0573E 00	8.0571E 00
31	5.3160E-01	8.1047E 00	8.1046E 00	8.1045E 00	8.1045E 00	8.1044E 00
32	4.1400E-01	8.1396E 00	8.1395E 00	8.1394E 00	8.1393E 00	8.1392E 00

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

CAPTURE CROSS-SECTIONS, BARNS, MATL W-183

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	2.8804E 00	2.4904E 00	2.3907E 00	2.2314E 00	2.0363E 00
6	2.7536E 02	8.3327E 00	7.3971E 00	7.1869E 00	6.9084E 00	6.6903E 00
7	2.1445E 02	1.0317E 01	9.4521E 00	9.2216E 00	8.8850E 00	8.5724E 00
8	1.6702E 02	9.4826E 00	8.7725E 00	8.5558E 00	8.2165E 00	7.8946E 00
9	1.3007E 02	1.0642E 01	8.8908E 00	8.4840E 00	7.9339E 00	7.4924E 00
10	1.0130E 02	5.3351E 00	4.4390E 00	4.2343E 00	3.9615E 00	3.7346E 00
11	7.8893E 01	3.8758E 00	2.8921E 00	2.6225E 00	2.1976E 00	1.7432E 00
12	6.1442E 01	3.1366E 00	2.7465E 00	2.6518E 00	2.5251E 00	2.4449E 00
13	4.7851E 01	8.4512E 00	7.1367E 00	6.7851E 00	6.2576E 00	5.7411E 00
14	3.7266E 01	4.2770E 01	3.6407E 01	3.5155E 01	3.3744E 01	3.3223E 01
15	2.9023E 01	4.1946E 00	4.1187E 00	4.1010E 00	4.0859E 00	4.0955E 00
16	2.2603E 01	6.1565E 01	6.0180E 01	5.9221E 01	6.0644E 01	6.1588E 01
17	1.7603E 01	2.6490E 00	2.6936E 00	2.7038E 00	2.7182E 00	2.7313E 00
18	1.3710E 01	8.6662E-01	8.5983E-01	8.5829E-01	8.5614E-01	8.5418E-01
19	1.0677E 01	1.1087E 00	1.1161E 00	1.1183E 00	1.1232E 00	1.1277E 00
20	8.3153E 00	5.4780E 00	5.4061E 00	5.3827E 00	5.3451E 00	5.3039E 00
21	6.4760E 00	6.0154E 01	5.0309E 01	4.8033E 01	4.5161E 01	4.2947E 01
22	5.0435E 00	3.8229E 00	3.8493E 00	3.8587E 00	3.8741E 00	3.8867E 00
23	3.9279E 00	1.9313E 00	1.9491E 00	1.9537E 00	1.9601E 00	1.9655E 00
24	3.0590E 00	1.3854E 00	1.3809E 00	1.3797E 00	1.3780E 00	1.3766E 00
25	2.3824E 00	1.3109E 00	1.3105E 00	1.3103E 00	1.3100E 00	1.3097E 00
26	1.8554E 00	1.3229E 00	1.3231E 00	1.3231E 00	1.3233E 00	1.3235E 00
27	1.4450E 00	1.3766E 00	1.3765E 00	1.3765E 00	1.3767E 00	1.3767E 00
28	1.1254E 00	1.4762E 00	1.4761E 00	1.4761E 00	1.4760E 00	1.4759E 00
29	8.7640E-01	1.6145E 00	1.6142E 00	1.6140E 00	1.6137E 00	1.6133E 00
30	6.8260E-01	1.7760E 00	1.7755E 00	1.7752E 00	1.7747E 00	1.7741E 00
31	5.3160E-01	1.9594E 00	1.9589E 00	1.9587E 00	1.9583E 00	1.9579E 00
32	4.1400E-01	2.1935E 00	2.1924E 00	2.1920E 00	2.1912E 00	2.1902E 00

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

SCATTER CROSS-SECTIONS, BARNS, MATL W-183

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
2	7.4852E 02	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
3	5.8295E 02	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
4	4.5400E 02	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
5	3.5358E 02	1.1748E 01	1.1475E 01	1.1404E 01	1.1287E 01	1.1138E 01
6	2.7536E 02	1.8613E 01	1.7292E 01	1.6986E 01	1.6570E 01	1.6221E 01
7	2.1445E 02	1.1990E 01	1.1507E 01	1.1379E 01	1.1196E 01	1.1033E 01
8	1.6702E 02	1.6484E 01	1.5939E 01	1.5763E 01	1.5484E 01	1.5217E 01
9	1.3007E 02	2.5845E 01	2.2345E 01	2.1524E 01	2.0395E 01	1.9443E 01
10	1.0130E 02	1.5564E 01	1.4773E 01	1.4534E 01	1.4315E 01	1.4063E 01
11	7.8893E 01	7.8190E 00	7.3282E 00	7.2328E 00	7.1348E 00	7.1302E 00
12	6.1442E 01	9.9798E 00	9.9643E 00	9.9558E 00	9.9352E 00	9.9357E 00
13	4.7851E 01	4.1680E 01	3.8767E 01	3.7953E 01	3.6743E 01	3.5535E 01
14	3.7266E 01	5.0302E 01	3.9445E 01	3.7333E 01	3.5046E 01	3.4511E 01
15	2.9023E 01	1.1257E 01	1.1093E 01	1.1053E 01	1.1057E 01	1.1131E 01
16	2.2603E 01	4.2946E 01	4.4668E 01	4.5535E 01	4.7447E 01	5.0015E 01
17	1.7603E 01	4.8657E 00	4.8117E 00	4.7993E 00	4.7813E 00	4.7658E 00
18	1.3710E 01	9.1314E 00	9.1329E 00	9.1333E 00	9.1339E 00	9.1344E 00
19	1.0677E 01	9.6851E 00	9.6910E 00	9.6931E 00	9.6965E 00	9.7000E 00
20	8.3153E 00	1.0843E 01	1.0831E 01	1.0828E 01	1.0822E 01	1.0816E 01
21	6.4760E 00	9.2282E 00	9.0296E 00	8.9924E 00	8.9572E 00	8.9589E 00
22	5.0435E 00	7.9051E 00	7.8993E 00	7.8972E 00	7.8937E 00	7.8907E 00
23	3.9279E 00	8.3467E 00	8.3404E 00	8.3388E 00	8.3366E 00	8.3347E 00
24	3.0590E 00	8.5873E 00	8.5902E 00	8.5911E 00	8.5923E 00	8.5932E 00
25	2.3824E 00	8.6611E 00	8.6518E 00	8.6529E 00	8.6625E 00	8.6631E 00
26	1.8554E 00	8.7100E 00	8.7102E 00	8.7102E 00	8.7104E 00	8.7105E 00
27	1.4450E 00	8.8829E 00	8.8829E 00	8.8829E 00	8.8829E 00	8.8830E 00
28	1.1254E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
29	8.7640E-01	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
30	6.8260E-01	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
31	5.3160E-01	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
32	4.1400E-01	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

CAPTURE CROSS-SECTIONS, BARNS, MATL W-184

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	8.7436E-01	7.5087E-01	7.1913E-01	6.7115E-01	6.2299E-01
2	7.4852E 02	9.5953E-01	8.0560E-01	7.6049E-01	6.8271E-01	5.9480E-01
3	5.8295E 02	6.8549E-01	6.3239E-01	6.1735E-01	5.8873E-01	5.4475E-01
4	4.5400E 02	6.5449E-03	6.5256E-03	6.5175E-03	5.5021E-03	6.4884E-03
5	3.5358E 02	8.3030E-01	6.9834E-01	6.6781E-01	6.2883E-01	6.0729E-01
6	2.7536E 02	9.4202E-01	8.3983E-01	8.1595E-01	7.8404E-01	7.5018E-01
7	2.1445E 02	8.7544E-01	7.5241E-01	7.2037E-01	6.7473E-01	6.3357E-01
8	1.6702E 02	5.0712E 00	4.3039E 00	4.1185E 00	3.8611E 00	3.6432E 00
9	1.3007E 02	3.6164E-01	3.6263E-01	3.6297E-01	3.6327E-01	3.6219E-01
10	1.0130E 02	1.1262E 00	8.5026E-01	7.8533E-01	5.9549E-01	6.1774E-01
11	7.8893E 01	9.8718E-02	9.2153E-02	8.9933E-02	8.5920E-02	8.0737E-02
12	6.1442E 01	4.6730E-02	4.6783E-02	4.6806E-02	4.6850E-02	4.6882E-02
13	4.7851E 01	4.1051E-02	4.1084E-02	4.1094E-02	4.1103E-02	4.1121E-02
14	3.7266E 01	3.9075E-02	3.9067E-02	3.9065E-02	3.9062E-02	3.9060E-02
15	2.9023E 01	3.9368E-02	3.9362E-02	3.9361E-02	3.9361E-02	3.9364E-02
16	2.2603E 01	4.0898E-02	4.0837E-02	4.0813E-02	4.0768E-02	4.0709E-02
17	1.7603E 01	4.2758E-02	4.2711E-02	4.2700E-02	4.2685E-02	4.2671E-02
18	1.3710E 01	4.7429E-02	4.7519E-02	4.7540E-02	4.7570E-02	4.7598E-02
19	1.0677E 01	5.1405E-02	5.1476E-02	5.1501E-02	5.1541E-02	5.1582E-02
20	8.3153E 00	5.6543E-02	5.6528E-02	5.6525E-02	5.6519E-02	5.6513E-02
21	6.4760E 00	6.3277E-02	6.3394E-02	6.3427E-02	6.3473E-02	6.3503E-02
22	5.0435E 00	6.9842E-02	6.9781E-02	6.9759E-02	6.9721E-02	6.9685E-02
23	3.9279E 00	7.6051E-02	7.5858E-02	7.5811E-02	7.5745E-02	7.5691E-02
24	3.0590E 00	8.8833E-02	8.9121E-02	8.9205E-02	8.9327E-02	8.9423E-02
25	2.3824E 00	9.9159E-02	9.9281E-02	9.9330E-02	9.9419E-02	9.9527E-02
26	1.8554E 00	1.1226E-01	1.1232E-01	1.1235E-01	1.1240E-01	1.1248E-01
27	1.4450E 00	1.2551E-01	1.2552E-01	1.2552E-01	1.2552E-01	1.2552E-01
28	1.1254E 00	1.4193E-01	1.4192E-01	1.4192E-01	1.4191E-01	1.4189E-01
29	8.7640E-01	1.6140E-01	1.6135E-01	1.6133E-01	1.6129E-01	1.6123E-01
30	6.8260E-01	1.8248E-01	1.8240E-01	1.8237E-01	1.8231E-01	1.8223E-01
31	5.3160E-01	2.0534E-01	2.0528E-01	2.0525E-01	2.0521E-01	2.0515E-01
32	4.1400E-01	2.3357E-01	2.3344E-01	2.3339E-01	2.3329E-01	2.3317E-01

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

SCATTER CROSS-SECTIONS, BARNS, MATL W-184

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	2.2665E 01	1.9981E 01	1.9243E 01	1.8105E 01	1.7013E 01
2	7.4852E 02	1.3268E 01	1.1668E 01	1.1233E 01	1.0571E 01	9.9869E 00
3	5.8295E 02	1.1131E 01	1.0745E 01	1.0545E 01	1.0472E 01	1.0225E 01
4	4.5400E 02	9.1563E 00	9.1568E 00	9.1571E 00	9.1573E 00	9.1589E 00
5	3.5358E 02	9.4550E 00	9.3619E 00	9.3405E 00	9.3144E 00	9.3011E 00
6	2.7536E 02	1.0623E 01	1.0414E 01	1.0360E 01	1.0278E 01	1.0199E 01
7	2.1445E 02	1.8917E 01	1.8891E 01	1.8892E 01	1.8895E 01	1.8883E 01
8	1.6702E 02	7.9797E 01	6.9965E 01	6.7798E 01	6.4983E 01	6.2864E 01
9	1.3007E 02	1.2996E 00	1.3124E 00	1.3163E 00	1.3234E 00	1.3350E 00
10	1.0130E 02	4.1525E 00	4.1186E 00	4.1091E 00	4.0942E 00	4.0774E 00
11	7.8893E 01	6.8471E 00	6.9262E 00	6.9617E 00	7.0416E 00	7.1850E 00
12	6.1442E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
13	4.7851E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
14	3.7266E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
15	2.9023E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
16	2.2603E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
17	1.7603E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
18	1.3710E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
19	1.0677E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
20	8.3153E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
21	6.4760E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
22	5.0435E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
23	3.9279E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
24	3.0590E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
25	2.3824E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
26	1.8554E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
27	1.4450E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
28	1.1254E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
29	8.7640E-01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
30	6.8260E-01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
31	5.3160E-01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
32	4.1400E-01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

CAPTURE CROSS-SECTIONS, BARNS, MATL W-185

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	8.1654E-01	5.9035E-01	6.5539E-01	6.0399E-01	5.5258E-01
2	7.4852E 02	4.6524E-01	4.2812E-01	4.1563E-01	3.9284E-01	3.6615E-01
3	5.8295E 02	1.1087E 00	9.4945E-01	9.0427E-01	8.2836E-01	7.3616E-01
4	4.5400E 02	1.0556E 00	9.2452E-01	8.9433E-01	8.5189E-01	8.1306E-01
5	3.5358E 02	6.7463E-01	5.8338E-01	5.6291E-01	5.3456E-01	5.1242E-01
6	2.7536E 02	1.0837E 00	9.3603E-01	9.0343E-01	8.5900E-01	8.1640E-01
7	2.1445E 02	2.4237E 00	2.1595E 00	2.1081E 00	2.0455E 00	1.9911E 00
8	1.6702E 02	3.6578E 00	3.4294E 00	3.3532E 00	3.2542E 00	3.1382E 00
9	1.3007E 02	7.1513E-02	7.2295E-02	7.2537E-02	7.2818E-02	7.2663E-02
10	1.0130E 02	1.1128E-01	1.0468E-01	1.0155E-01	9.5686E-02	8.8945E-02
11	7.8893E 01	1.4244E-02	1.4201E-02	1.4183E-02	1.4143E-02	1.4076E-02
12	6.1442E 01	1.2574E-02	1.2579E-02	1.2582E-02	1.2586E-02	1.2590E-02
13	4.7851E 01	1.2062E-02	1.2063E-02	1.2063E-02	1.2063E-02	1.2064E-02
14	3.7266E 01	6.5105E-01	6.6598E-01	6.7035E-01	6.7705E-01	6.8296E-01
15	2.9023E 01	1.9176E 00	1.9013E 00	1.8983E 00	1.8980E 00	1.9062E 00
16	2.2603E 01	1.0929E 01	1.0440E 01	1.0243E 01	9.8666E 00	9.3702E 00
17	1.7603E 01	2.1703E 02	2.0044E 02	1.9565E 02	1.9132E 02	1.8647E 02
18	1.3710E 01	4.9510E 01	4.6715E 01	4.6093E 01	4.5230E 01	4.4453E 01
19	1.0677E 01	1.3157E 01	1.2997E 01	1.2942E 01	1.2856E 01	1.2769E 01
20	8.3153E 00	7.4687E 00	7.4743E 00	7.4755E 00	7.4771E 00	7.4791E 00
21	6.4760E 00	5.5232E 00	5.5075E 00	5.5032E 00	5.4975E 00	5.4948E 00
22	5.0435E 00	4.8700E 00	4.8732E 00	4.8744E 00	4.8763E 00	4.8781E 00
23	3.9279E 00	4.6171E 00	4.6210E 00	4.6220E 00	4.6234E 00	4.6246E 00
24	3.0590E 00	4.5549E 00	4.5568E 00	4.5574E 00	4.5583E 00	4.5590E 00
25	2.3824E 00	4.6870E 00	4.6390E 00	4.6893E 00	4.6912E 00	4.6930E 00
26	1.8554E 00	4.9603E 00	4.9517E 00	4.9523E 00	4.9636E 00	4.9654E 00
27	1.4450E 00	5.2929E 00	5.2929E 00	5.2929E 00	5.2930E 00	5.2930E 00
28	1.1254E 00	5.7613E 00	5.7609E 00	5.7603E 00	5.7605E 00	5.7601E 00
29	8.7640E-01	6.3591E 00	6.3576E 00	6.3569E 00	6.3555E 00	6.3537E 00
30	6.8260E-01	7.0342E 00	7.0318E 00	7.0308E 00	7.0287E 00	7.0261E 00
31	5.3160E-01	7.7877E 00	7.7858E 00	7.7850E 00	7.7834E 00	7.7815E 00
32	4.1400E-01	8.7397E 00	8.7355E 00	8.7338E 00	8.7304E 00	8.7263E 00

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

SCATTER CROSS-SECTIONS, BARNS, MATL W-185

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.7534E 01	1.5856E 01	1.5432E 01	1.4827E 01	1.4314E 01
2	7.4852E 02	1.2853E 01	1.2608E 01	1.2490E 01	1.2222E 01	1.1819E 01
3	5.8295E 02	1.7711E 01	1.4953E 01	1.4185E 01	1.2937E 01	1.1551E 01
4	4.5400E 02	1.2405E 01	1.1719E 01	1.1542E 01	1.1274E 01	1.1022E 01
5	3.5358E 02	9.8391E 00	9.7224E 00	9.6959E 00	9.6660E 00	9.6545E 00
6	2.7536E 02	9.6966E 00	9.6605E 00	9.6553E 00	9.6504E 00	9.6453E 00
7	2.1445E 02	3.5710E 01	3.4005E 01	3.3722E 01	3.3408E 01	3.3111E 01
8	1.6702E 02	5.8568E 00	5.5867E 00	5.4943E 00	5.3410E 00	5.1790E 00
9	1.3007E 02	8.8145E 00	8.8142E 00	8.8144E 00	8.8155E 00	8.8199E 00
10	1.0130E 02	9.2188E 00	9.2184E 00	9.2183E 00	9.2182E 00	9.2182E 00
11	7.8893E 01	9.2196E 00	9.2196E 00	9.2196E 00	9.2196E 00	9.2197E 00
12	6.1442E 01	9.2200E 00	9.2200E 00	9.2200E 00	9.2200E 00	9.2200E 00
13	4.7851E 01	9.2200E 00	9.2200E 00	9.2200E 00	9.2200E 00	9.2200E 00
14	3.7266E 01	3.2665E 01	3.3035E 01	3.3135E 01	3.3284E 01	3.3401E 01
15	2.9023E 01	5.4956E 01	5.4710E 01	5.4657E 01	5.4659E 01	5.4803E 01
16	2.2603E 01	1.6367E 02	1.5808E 02	1.5534E 02	1.5156E 02	1.4594E 02
17	1.7603E 01	1.7898E 03	1.6651E 03	1.6365E 03	1.5965E 03	1.5600E 03
18	1.3710E 01	2.5479E 02	2.3680E 02	2.3281E 02	2.2727E 02	2.2230E 02
19	1.0677E 01	3.6902E 01	3.6123E 01	3.5855E 01	3.5437E 01	3.5017E 01
20	8.3153E 00	1.1392E 01	1.1413E 01	1.1417E 01	1.1423E 01	1.1430E 01
21	6.4760E 00	4.3492E 00	4.2979E 00	4.2839E 00	4.2655E 00	4.2571E 00
22	5.0435E 00	2.2042E 00	2.2150E 00	2.2190E 00	2.2256E 00	2.2316E 00
23	3.9279E 00	1.2974E 00	1.3150E 00	1.3195E 00	1.3257E 00	1.3309E 00
24	3.0590E 00	5.5944E-01	5.4957E-01	5.4578E-01	5.4276E-01	5.3966E-01
25	2.3824E 00	3.1618E-01	3.1395E-01	3.1305E-01	3.1144E-01	3.0943E-01
26	1.8554E 00	1.6310E-01	1.6256E-01	1.6233E-01	1.6185E-01	1.6117E-01
27	1.4450E 00	7.5386E-02	7.5381E-02	7.5373E-02	7.5373E-02	7.5359E-02
28	1.1254E 00	2.0363E-02	2.0393E-02	2.0435E-02	2.0432E-02	2.0465E-02
29	8.7640E-01	3.6338E-04	3.6544E-04	3.6634E-04	3.6816E-04	3.7063E-04
30	6.8260E-01	0.	0.	0.	0.	0.
31	5.3160E-01	0.	0.	0.	0.	0.
32	4.1400E-01	0.	0.	0.	0.	0.

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

CAPTURE CROSS SECTION, BARNS, NATURAL TUNGSTEN

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	6.6513E-01	5.7056E-01	5.4612E-01	5.0942E-01	4.7388E-01
2	7.4852E 02	8.3883E-01	7.3452E-01	7.0413E-01	6.5313E-01	5.9403E-01
3	5.8295E 02	6.9510E-01	6.1253E-01	5.8958E-01	5.5104E-01	5.0210E-01
4	4.5400E 02	5.3653E-01	4.6540E-01	4.4804E-01	4.2305E-01	4.0055E-01
5	3.5358E 02	1.2479E 00	1.0731E 00	1.0311E 00	9.7042E-01	9.1417E-01
6	2.7536E 02	2.0556E 00	1.8208E 00	1.7575E 00	1.6960E 00	1.6366E 00
7	2.1445E 02	3.2116E 00	2.8771E 00	2.7956E 00	2.6850E 00	2.5851E 00
8	1.6702E 02	4.2580E 00	3.8252E 00	3.7102E 00	3.5399E 00	3.3834E 00
9	1.3007E 02	1.8659E 00	1.6043E 00	1.5434E 00	1.4616E 00	1.3971E 00
10	1.0130E 02	3.1466E 00	2.6308E 00	2.5031E 00	2.3216E 00	2.1527E 00
11	7.8893E 01	6.8364E-01	5.3720E-01	4.9558E-01	4.3193E-01	3.6167E-01
12	6.1442E 01	5.8913E-01	5.3010E-01	5.1375E-01	4.9655E-01	4.8377E-01
13	4.7851E 01	1.2904E 00	1.0956E 00	1.0432E 00	9.6445E-01	8.8719E-01
14	3.7266E 01	6.3685E 00	5.4565E 00	5.2774E 00	5.0761E 00	5.0028E 00
15	2.9023E 01	1.1828E 00	1.1665E 00	1.1529E 00	1.1604E 00	1.1641E 00
16	2.2603E 01	1.3886E 01	1.3442E 01	1.3349E 01	1.3219E 01	1.3103E 01
17	1.7603E 01	1.1896E 02	1.1308E 02	1.1174E 02	1.0985E 02	1.0814E 02
18	1.3710E 01	1.5378E 01	1.4992E 01	1.4794E 01	1.4519E 01	1.4270E 01
19	1.0677E 01	4.3004E 00	4.2529E 00	4.2355E 00	4.2110E 00	4.1852E 00
20	8.3153E 00	3.1933E 00	3.1845E 00	3.1815E 00	3.1764E 00	3.1710E 00
21	6.4760E 00	1.0772E 01	9.3572E 00	9.0376E 00	8.6183E 00	8.3010E 00
22	5.0435E 00	3.6803E 00	3.6556E 00	3.6465E 00	3.6310E 00	3.6156E 00
23	3.9279E 00	2.6783E 01	2.3086E 01	2.2302E 01	2.1292E 01	2.0485E 01
24	3.0590E 00	1.0939E 01	1.0155E 01	9.9610E 00	9.7033E 00	9.5187E 00
25	2.3824E 00	3.8403E 00	3.8195E 00	3.8113E 00	3.7963E 00	3.7783E 00
26	1.8554E 00	2.9971E 00	2.9956E 00	2.9949E 00	2.9935E 00	2.9915E 00
27	1.4450E 00	2.8262E 00	2.8262E 00	2.8252E 00	2.8262E 00	2.8262E 00
28	1.1254E 00	2.8876E 00	2.8875E 00	2.8875E 00	2.8874E 00	2.8873E 00
29	8.7640E-01	3.0699E 00	3.0694E 00	3.0691E 00	3.0687E 00	3.0680E 00
30	6.8260E-01	3.3185E 00	3.3175E 00	3.3172E 00	3.3164E 00	3.3154E 00
31	5.3160E-01	3.6194E 00	3.6185E 00	3.6183E 00	3.6176E 00	3.6163E 00
32	4.1400E-01	4.0175E 00	4.0157E 00	4.0150E 00	4.0135E 00	4.0118E 00

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN HYDROGEN

SCATTER CROSS SECTION, BARNS, NATURAL TUNGSTEN

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.8286E 01	1.6647E 01	1.6212E 01	1.5563E 01	1.4967E 01
2	7.4852E 02	1.2751E 01	1.1668E 01	1.1362E 01	1.0862E 01	1.0320E 01
3	5.8295E 02	1.2714E 01	1.1719E 01	1.1444E 01	1.0992E 01	1.0481E 01
4	4.5400E 02	1.1228E 01	1.0738E 01	1.0516E 01	1.0437E 01	1.0277E 01
5	3.5358E 02	1.0634E 01	1.0409E 01	1.0348E 01	1.0272E 01	1.0230E 01
6	2.7536E 02	1.2844E 01	1.2550E 01	1.2477E 01	1.2369E 01	1.2262E 01
7	2.1445E 02	3.0420E 01	2.8430E 01	2.8011E 01	2.7477E 01	2.7059E 01
8	1.6702E 02	2.9536E 01	2.6357E 01	2.5533E 01	2.4686E 01	2.3947E 01
9	1.3007E 02	9.6623E 00	9.1646E 00	9.0433E 00	8.8905E 00	8.7663E 00
10	1.0130E 02	1.6095E 01	1.4784E 01	1.4469E 01	1.4039E 01	1.3710E 01
11	7.8893E 01	7.4863E 00	7.4681E 00	7.4778E 00	7.5162E 00	7.6091E 00
12	6.1442E 01	9.3156E 00	9.3119E 00	9.3104E 00	9.3072E 00	9.3025E 00
13	4.7851E 01	1.3938E 01	1.3418E 01	1.3302E 01	1.3126E 01	1.2952E 01
14	3.7266E 01	2.1734E 01	2.0276E 01	2.0000E 01	1.9713E 01	1.9669E 01
15	2.9023E 01	2.2506E 01	2.2408E 01	2.2391E 01	2.2389E 01	2.2437E 01
16	2.2603E 01	6.2593E 01	6.1060E 01	6.0477E 01	5.9380E 01	5.7955E 01
17	1.7603E 01	5.6142E 02	5.2569E 02	5.1750E 02	5.0604E 02	4.9559E 02
18	1.3710E 01	7.7449E 01	7.2341E 01	7.1208E 01	6.9635E 01	6.8224E 01
19	1.0677E 01	1.6771E 01	1.6571E 01	1.6502E 01	1.6394E 01	1.6285E 01
20	8.3153E 00	1.0010E 01	1.0014E 01	1.0015E 01	1.0016E 01	1.0017E 01
21	6.4760E 00	8.1063E 00	8.0671E 00	8.0538E 00	8.0501E 00	8.0490E 00
22	5.0435E 00	7.6737E 00	7.6694E 00	7.6678E 00	7.6652E 00	7.6628E 00
23	3.9279E 00	9.0630E 00	8.9358E 00	8.9050E 00	8.8665E 00	8.8339E 00
24	3.0590E 00	5.4600E 00	5.4927E 00	5.5015E 00	5.5138E 00	5.5229E 00
25	2.3824E 00	5.9354E 00	5.9380E 00	5.9391E 00	5.9410E 00	5.9433E 00
26	1.8554E 00	6.0731E 00	6.0735E 00	6.0737E 00	6.0740E 00	6.0745E 00
27	1.4450E 00	6.1514E 00	6.1515E 00	6.1515E 00	6.1515E 00	6.1515E 00
28	1.1254E 00	6.2142E 00	6.2142E 00	6.2142E 00	6.2142E 00	6.2142E 00
29	8.7640E-01	6.2305E 00	6.2364E 00	6.2364E 00	6.2363E 00	6.2362E 00
30	6.8260E-01	6.2545E 00	6.2544E 00	6.2544E 00	6.2544E 00	6.2543E 00
31	5.3160E-01	6.2669E 00	6.2669E 00	6.2669E 00	6.2668E 00	6.2668E 00
32	4.1400E-01	6.2761E 00	6.2761E 00	6.2760E 00	6.2760E 00	6.2760E 00

BROAD GROUP AVERAGED CAPTURE/SCATTER CROSS SECTION

BG NO.	CONTAINS GROUPS	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	1 TO 3	7.3559E-01	6.4173E-01	6.1574E-01	5.7341E-01	5.2547E-01
		1.4480E 01	1.3243E 01	1.2907E 01	1.2381E 01	1.1855E 01
2	4 TO 10	2.2188E 00	1.8843E 00	1.7927E 00	1.6468E 00	1.4762E 00
		1.6533E 01	1.5116E 01	1.4736E 01	1.4131E 01	1.3439E 01
3	11 TO 15	1.5861E 00	1.3514E 00	1.2507E 00	1.1171E 00	9.6197E-01
		1.4307E 01	1.3547E 01	1.3434E 01	1.3042E 01	1.2508E 01
4	16 TO 19	1.3889E 01	1.2119E 01	1.1711E 01	1.1153E 01	1.0669E 01
		6.3872E 01	5.4984E 01	5.2895E 01	4.9987E 01	4.7372E 01
5	20 TO 24	8.2077E 00	7.0323E 00	6.7509E 00	6.3614E 00	6.0299E 00
		9.1644E 00	8.2279E 00	8.2517E 00	8.2947E 00	8.3476E 00
6	25 TO 28	3.1245E 00	3.1115E 00	3.1063E 00	3.0966E 00	3.0846E 00
		6.0966E 00	6.0991E 00	6.1032E 00	6.1021E 00	6.1046E 00
7	29 TO 32	3.4979E 00	3.4912E 00	3.4884E 00	3.4829E 00	3.4761E 00
		6.2581E 00	6.2579E 00	6.2577E 00	6.2575E 00	6.2572E 00

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

FLUXES BY CASE

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	2.1104E-01	1.9741E-01	1.9199E-01	1.8044E-01	1.5868E-01
2	7.4852E 02	2.3144E-01	2.1753E-01	2.1143E-01	1.9821E-01	1.7399E-01
3	5.8295E 02	2.2341E-01	2.1152E-01	2.0593E-01	1.9210E-01	1.6097E-01
4	4.5400E 02	2.2657E-01	2.1688E-01	2.1203E-01	1.9961E-01	1.7076E-01
5	3.5358E 02	2.0877E-01	1.9349E-01	1.8564E-01	1.7106E-01	1.4098E-01
6	2.7536E 02	1.8695E-01	1.6318E-01	1.5235E-01	1.3041E-01	9.2909E-02
7	2.1445E 02	1.5942E-01	1.2927E-01	1.1719E-01	9.3270E-02	5.9685E-02
8	1.6702E 02	1.6712E-01	1.3599E-01	1.2367E-01	9.9153E-02	6.3774E-02
9	1.3007E 02	1.8405E-01	1.6271E-01	1.5310E-01	1.3129E-01	9.2175E-02
10	1.0130E 02	1.6461E-01	1.4264E-01	1.3341E-01	1.1348E-01	7.9823E-02
11	7.8893E 01	1.9737E-01	1.8338E-01	1.7544E-01	1.5934E-01	1.2344E-01
12	6.1442E 01	1.9899E-01	1.9075E-01	1.8533E-01	1.7705E-01	1.5383E-01
13	4.7851E 01	1.7658E-01	1.6351E-01	1.5752E-01	1.4345E-01	1.1585E-01
14	3.7266E 01	1.1605E-01	8.6197E-02	7.5312E-02	5.5755E-02	3.2376E-02
15	2.9023E 01	1.6652E-01	1.4390E-01	1.3327E-01	1.0992E-01	7.2793E-02
16	2.2603E 01	6.7473E-02	4.2852E-02	3.6154E-02	2.5785E-02	1.4789E-02
17	1.7603E 01	1.0639E-02	5.9117E-03	4.7712E-03	3.1352E-03	1.6134E-03
18	1.3710E 01	6.9414E-02	4.1708E-02	3.4244E-02	2.3035E-02	1.2102E-02
19	1.0677E 01	1.1811E-01	8.8625E-02	7.7417E-02	5.7127E-02	3.2875E-02
20	8.3153E 00	1.1834E-01	9.5441E-02	8.5512E-02	6.6093E-02	3.9809E-02
21	6.4760E 00	6.7310E-02	4.7125E-02	4.0355E-02	2.8762E-02	1.5791E-02
22	5.0435E 00	9.9631E-02	7.8055E-02	6.9394E-02	5.2623E-02	3.0753E-02
23	3.9279E 00	3.2565E-02	2.0745E-02	1.7274E-02	1.1809E-02	6.2635E-03
24	3.0590E 00	5.3594E-02	3.5277E-02	2.9562E-02	2.0292E-02	1.0673E-02
25	2.3824E 00	7.6227E-02	5.9114E-02	5.2359E-02	3.9409E-02	2.2584E-02
26	1.8554E 00	7.4005E-02	5.9805E-02	5.3875E-02	4.1909E-02	2.5168E-02
27	1.4450E 00	6.7160E-02	5.4806E-02	4.9582E-02	3.8921E-02	2.3681E-02
28	1.1254E 00	5.9490E-02	4.8405E-02	4.3741E-02	3.4251E-02	2.0785E-02
29	8.7640E-01	5.1766E-02	4.1747E-02	3.7583E-02	2.9205E-02	1.7541E-02
30	6.8260E-01	4.4205E-02	3.5220E-02	3.1543E-02	2.4259E-02	1.4372E-02
31	5.3160E-01	3.7181E-02	2.9202E-02	2.5995E-02	1.9753E-02	1.1527E-02
32	4.1400E-01	3.0790E-02	2.3768E-02	2.1008E-02	1.5744E-02	9.0392E-03

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

CAPTURE CROSS-SECTIONS, BARNS, MATL W-183

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	0.	0.	0.	0.	0.
6	2.7536E 02	0.	0.	0.	0.	0.
7	2.1445E 02	0.	0.	0.	0.	0.
8	1.6702E 02	0.	0.	0.	0.	0.
9	1.3007E 02	0.	0.	0.	0.	0.
10	1.0130E 02	6.8566E-04	5.8382E-04	5.5533E-04	5.1665E-04	4.8163E-04
11	7.8893E 01	1.4716E 01	1.4496E 01	1.4455E 01	1.4517E 01	1.4818E 01
12	6.1442E 01	6.9652E 01	6.7530E 01	6.6985E 01	6.6252E 01	6.5314E 01
13	4.7851E 01	2.9777E 01	2.5854E 01	2.4515E 01	2.2633E 01	2.0577E 01
14	3.7266E 01	1.5988E-01	1.4879E-01	1.4527E-01	1.4322E-01	1.4198E-01
15	2.9023E 01	4.3650E-02	4.3768E-02	4.3775E-02	4.3733E-02	4.3587E-02
16	2.2603E 01	9.5136E-02	9.0826E-02	8.9050E-02	8.5559E-02	8.0853E-02
17	1.7603E 01	1.7117E 00	1.6171E 00	1.5954E 00	1.5648E 00	1.5369E 00
18	1.3710E 01	6.2433E 02	5.7651E 02	5.6504E 02	5.4865E 02	5.3340E 02
19	1.0677E 01	2.9837E 00	2.9102E 00	2.8853E 00	2.8465E 00	2.8076E 00
20	8.3153E 00	1.0298E 00	1.0309E 00	1.0312E 00	1.0315E 00	1.0318E 00
21	6.4760E 00	6.4130E-01	6.3864E-01	6.3792E-01	6.3698E-01	6.3660E-01
22	5.0435E 00	5.2789E-01	5.2843E-01	5.2853E-01	5.2895E-01	5.2925E-01
23	3.9279E 00	4.8285E-01	4.8361E-01	4.8331E-01	4.8409E-01	4.8431E-01
24	3.0590E 00	4.5945E-01	4.5938E-01	4.5937E-01	4.5935E-01	4.5934E-01
25	2.3824E 00	4.6551E-01	4.6564E-01	4.6569E-01	4.6578E-01	4.6590E-01
26	1.8554E 00	4.8648E-01	4.8660E-01	4.8665E-01	4.8675E-01	4.8691E-01
27	1.4450E 00	5.1548E-01	5.1548E-01	5.1548E-01	5.1549E-01	5.1550E-01
28	1.1254E 00	5.5756E-01	5.5752E-01	5.5751E-01	5.5748E-01	5.5744E-01
29	8.7640E-01	6.1161E-01	6.1145E-01	6.1139E-01	6.1126E-01	6.1108E-01
30	6.8260E-01	6.7411E-01	6.7387E-01	6.7378E-01	6.7358E-01	6.7333E-01
31	5.3160E-01	7.4557E-01	7.4539E-01	7.4531E-01	7.4515E-01	7.4497E-01
32	4.1400E-01	8.3331E-01	8.3289E-01	8.3272E-01	8.3243E-01	8.3203E-01

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

SCATTER CROSS-SECTIONS, BARNS, MATL W-180

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
2	7.4852E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
3	5.8295E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
4	4.5400E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
5	3.5358E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
6	2.7536E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
7	2.1445E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
8	1.6702E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
9	1.3007E 02	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
10	1.0130E 02	9.0537E 00	9.0517E 00	9.0511E 00	9.0504E 00	9.0497E 00
11	7.8893E 01	1.2559E 01	1.2594E 01	1.2619E 01	1.2689E 01	1.2829E 01
12	6.1442E 01	4.3541E 01	4.2498E 01	4.2233E 01	4.2071E 01	4.1778E 01
13	4.7851E 01	1.2832E 01	1.2454E 01	1.2331E 01	1.2132E 01	1.1923E 01
14	3.7266E 01	8.4336E 00	8.4548E 00	8.4602E 00	8.4673E 00	8.4720E 00
15	2.9023E 01	9.0227E 00	9.0230E 00	9.0233E 00	9.0240E 00	9.0249E 00
16	2.2603E 01	9.3363E 00	9.3161E 00	9.3073E 00	9.2915E 00	9.2696E 00
17	1.7603E 01	1.2751E 01	1.2650E 01	1.2527E 01	1.2594E 01	1.2565E 01
18	1.3710E 01	1.3250E 02	1.2182E 02	1.1923E 02	1.1557E 02	1.1232E 02
19	1.0677E 01	5.2751E 00	5.3168E 00	5.3312E 00	5.3539E 00	5.3767E 00
20	8.3153E 00	7.0027E 00	6.9910E 00	6.9871E 00	6.9838E 00	6.9739E 00
21	6.4760E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
22	5.0435E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
23	3.9279E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
24	3.0590E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
25	2.3824E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
26	1.8554E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
27	1.4450E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
28	1.1254E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
29	8.7640E-01	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
30	6.8260E-01	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
31	5.3160E-01	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00
32	4.1400E-01	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00	9.0400E 00

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

CAPTURE CROSS-SECTIONS, BARNS, MATL W-182

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	6.2556E-01	5.4649E-01	5.2735E-01	5.0040E-01	4.7697E-01
2	7.4852E 02	1.5625E 00	1.3843E 00	1.3367E 00	1.2583E 00	1.1652E 00
3	5.8295E 02	6.4376E-01	5.6410E-01	5.4351E-01	5.1220E-01	4.7716E-01
4	4.5400E 02	8.8894E-01	7.6054E-01	7.2731E-01	6.7834E-01	6.3495E-01
5	3.5358E 02	1.4655E 00	1.2579E 00	1.2204E 00	1.1533E 00	1.0955E 00
6	2.7536E 02	9.8313E-01	8.8137E-01	8.5594E-01	8.2261E-01	8.0187E-01
7	2.1445E 02	2.9149E 00	2.5463E 00	2.4395E 00	2.3405E 00	2.2392E 00
8	1.6702E 02	1.1415E 00	1.0251E 00	9.9428E-01	9.4990E-01	9.1035E-01
9	1.3007E 02	7.6035E-01	7.2283E-01	7.1377E-01	7.0309E-01	7.0109E-01
10	1.0130E 02	7.5767E 00	6.4400E 00	6.1458E 00	5.7191E 00	5.3387E 00
11	7.8893E 01	2.6819E-01	2.5885E-01	2.5473E-01	2.4604E-01	2.3216E-01
12	6.1442E 01	8.5577E-02	8.5853E-02	8.5972E-02	8.6195E-02	8.6352E-02
13	4.7851E 01	5.7737E-02	5.7884E-02	5.7927E-02	5.7993E-02	5.8052E-02
14	3.7266E 01	4.7342E-02	4.7247E-02	4.7220E-02	4.7183E-02	4.7145E-02
15	2.9023E 01	8.2059E-02	7.9414E-02	7.8744E-02	7.7969E-02	7.7692E-02
16	2.2603E 01	7.1360E 00	6.7293E 00	6.5535E 00	6.2436E 00	5.8188E 00
17	1.7603E 01	2.1559E 02	2.1106E 02	2.1004E 02	2.0859E 02	2.0727E 02
18	1.3710E 01	3.0787E 00	2.9892E 00	2.9588E 00	2.9404E 00	2.9145E 00
19	1.0677E 01	1.4542E 00	1.4425E 00	1.4384E 00	1.4320E 00	1.4255E 00
20	8.3153E 00	1.0003E 00	1.0003E 00	1.0002E 00	1.0000E 00	9.9988E-01
21	6.4760E 00	1.9628E 00	1.9895E 00	1.9976E 00	2.0092E 00	2.0175E 00
22	5.0435E 00	6.4477E 00	6.3382E 00	6.2983E 00	6.2303E 00	6.1649E 00
23	3.9279E 00	9.2865E 01	7.9231E 01	7.6323E 01	7.2582E 01	6.9584E 01
24	3.0590E 00	3.6310E 01	3.3269E 01	3.2517E 01	3.1519E 01	3.0806E 01
25	2.3824E 00	8.7547E 00	8.6722E 00	8.6393E 00	8.5793E 00	8.5271E 00
26	1.8554E 00	5.2017E 00	5.1940E 00	5.1908E 00	5.1838E 00	5.1741E 00
27	1.4450E 00	4.1149E 00	4.1149E 00	4.1149E 00	4.1148E 00	4.1145E 00
28	1.1254E 00	3.7665E 00	3.7665E 00	3.7665E 00	3.7668E 00	3.7669E 00
29	8.7640E-01	3.7114E 00	3.7113E 00	3.7113E 00	3.7112E 00	3.7111E 00
30	6.8260E-01	3.8090E 00	3.8085E 00	3.8083E 00	3.8078E 00	3.8072E 00
31	5.3160E-01	4.0107E 00	4.0101E 00	4.0099E 00	4.0094E 00	4.0088E 00
32	4.1400E-01	4.3242E 00	4.3225E 00	4.3220E 00	4.3207E 00	4.3192E 00

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

SCATTER CROSS-SECTIONS, BARNS, MATL W-182

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.9061E 01	1.7773E 01	1.7440E 01	1.6953E 01	1.6518E 01
2	7.4852E 02	1.4061E 01	1.2073E 01	1.1544E 01	1.1705E 01	9.7633E 00
3	5.8295E 02	1.1149E 01	1.0800E 01	1.0697E 01	1.0531E 01	1.0372E 01
4	4.5400E 02	1.3524E 01	1.2410E 01	1.2134E 01	1.1746E 01	1.1411E 01
5	3.5358E 02	1.2458E 01	1.1799E 01	1.1659E 01	1.1498E 01	1.1447E 01
6	2.7536E 02	1.5558E 01	1.5555E 01	1.5514E 01	1.5434E 01	1.5312E 01
7	2.1445E 02	4.8349E 01	4.2935E 01	4.1720E 01	4.0132E 01	3.8971E 01
8	1.6702E 02	3.9169E 00	3.8739E 00	3.8505E 00	3.8399E 00	3.8185E 00
9	1.3007E 02	1.1437E 01	1.1446E 01	1.1448E 01	1.1456E 01	1.1488E 01
10	1.0130E 02	3.7746E 01	3.3255E 01	3.2177E 01	3.0715E 01	2.9529E 01
11	7.8893E 01	6.1401E 00	6.2477E 00	6.2954E 00	6.4022E 00	6.5909E 00
12	6.1442E 01	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00
13	4.7851E 01	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00
14	3.7266E 01	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00	9.0800E 00
15	2.9023E 01	9.3067E 00	9.2906E 00	9.2865E 00	9.2818E 00	9.2802E 00
16	2.2603E 01	2.6732E 01	2.6011E 01	2.5712E 01	2.5138E 01	2.4379E 01
17	1.7603E 01	1.8759E 02	1.8642E 02	1.8516E 02	1.8579E 02	1.8545E 02
18	1.3710E 01	2.8854E 00	2.9531E 00	2.9537E 00	2.9907E 00	3.0109E 00
19	1.0677E 01	7.8691E 00	7.9451E 00	7.9707E 00	8.0101E 00	8.0497E 00
20	8.3153E 00	9.0952E 00	9.0943E 00	9.0939E 00	9.0934E 00	9.0928E 00
21	6.4760E 00	1.0328E 01	1.0342E 01	1.0346E 01	1.0351E 01	1.0355E 01
22	5.0435E 00	1.1704E 01	1.1680E 01	1.1671E 01	1.1656E 01	1.1642E 01
23	3.9279E 00	1.7663E 01	1.7169E 01	1.7053E 01	1.6898E 01	1.6771E 01
24	3.0590E 00	4.7074E 00	4.8426E 00	4.8790E 00	4.9297E 00	4.9676E 00
25	2.3824E 00	6.7462E 00	6.7585E 00	6.7635E 00	6.7725E 00	6.7833E 00
26	1.8554E 00	7.4084E 00	7.4103E 00	7.4111E 00	7.4128E 00	7.4153E 00
27	1.4450E 00	7.7135E 00	7.7135E 00	7.7135E 00	7.7135E 00	7.7136E 00
28	1.1254E 00	7.8814E 00	7.8813E 00	7.8813E 00	7.8812E 00	7.8811E 00
29	8.7640E-01	7.9862E 00	7.9860E 00	7.9859E 00	7.9857E 00	7.9855E 00
30	6.8260E-01	8.0557E 00	8.0555E 00	8.0554E 00	8.0552E 00	8.0550E 00
31	5.3160E-01	8.1038E 00	8.1037E 00	8.1035E 00	8.1035E 00	8.1034E 00
32	4.1400E-01	8.1383E 00	8.1382E 00	8.1382E 00	8.1381E 00	8.1379E 00

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

CAPTURE CROSS-SECTIONS, BARNS, MATL W-183

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	2.8720E 00	2.4829E 00	2.3833E 00	2.2241E 00	2.0289E 00
6	2.7536E 02	8.3315E 00	7.3962E 00	7.1350E 00	6.9077E 00	6.6898E 00
7	2.1445E 02	1.0319E 01	9.4541E 00	9.2235E 00	8.8868E 00	8.5738E 00
8	1.6702E 02	9.4595E 00	8.7508E 00	8.5346E 00	8.1961E 00	7.8749E 00
9	1.3007E 02	1.0654E 01	8.9001E 00	8.4927E 00	7.9418E 00	7.4997E 00
10	1.0130E 02	5.2398E 00	4.4008E 00	4.1977E 00	3.9268E 00	3.7014E 00
11	7.8893E 01	3.9109E 00	2.9178E 00	2.6457E 00	2.2168E 00	1.7584E 00
12	6.1442E 01	3.1185E 00	2.7304E 00	2.6352E 00	2.5102E 00	2.4307E 00
13	4.7851E 01	8.3700E 00	7.0712E 00	6.7240E 00	6.2031E 00	5.6929E 00
14	3.7266E 01	4.3139E 01	3.6725E 01	3.5455E 01	3.4055E 01	3.3564E 01
15	2.9023E 01	4.1701E 00	4.0958E 00	4.0736E 00	4.0646E 00	4.0755E 00
16	2.2603E 01	6.2034E 01	6.0622E 01	6.0559E 01	6.1076E 01	6.2016E 01
17	1.7603E 01	2.6583E 00	2.7027E 00	2.7129E 00	2.7272E 00	2.7403E 00
18	1.3710E 01	8.6780E-01	8.6092E-01	8.5935E-01	8.5716E-01	8.5517E-01
19	1.0677E 01	1.1059E 00	1.1133E 00	1.1150E 00	1.1203E 00	1.1248E 00
20	8.3153E 00	5.4029E 00	5.3317E 00	5.3085E 00	5.2715E 00	5.2309E 00
21	6.4760E 00	6.0951E 01	5.0995E 01	4.8745E 01	4.5791E 01	4.3551E 01
22	5.0435E 00	3.8540E 00	3.8802E 00	3.8894E 00	3.9044E 00	3.9165E 00
23	3.9279E 00	1.9339E 00	1.9516E 00	1.9561E 00	1.9625E 00	1.9680E 00
24	3.0590E 00	1.3865E 00	1.3819E 00	1.3807E 00	1.3789E 00	1.3776E 00
25	2.3824E 00	1.3113E 00	1.3109E 00	1.3107E 00	1.3104E 00	1.3101E 00
26	1.8554E 00	1.3219E 00	1.3221E 00	1.3222E 00	1.3223E 00	1.3225E 00
27	1.4450E 00	1.3758E 00	1.3758E 00	1.3758E 00	1.3758E 00	1.3758E 00
28	1.1254E 00	1.4744E 00	1.4743E 00	1.4743E 00	1.4742E 00	1.4741E 00
29	8.7640E-01	1.6096E 00	1.6093E 00	1.6091E 00	1.6088E 00	1.6083E 00
30	6.8260E-01	1.7697E 00	1.7691E 00	1.7688E 00	1.7683E 00	1.7677E 00
31	5.3160E-01	1.9547E 00	1.9542E 00	1.9540E 00	1.9536E 00	1.9531E 00
32	4.1400E-01	2.1833E 00	2.1822E 00	2.1818E 00	2.1809E 00	2.1799E 00

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

SCATTER CROSS-SECTIONS, BARNS, MATL W-183

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
2	7.4852E 02	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
3	5.8295E 02	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
4	4.5400E 02	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
5	3.5358E 02	1.1742E 01	1.1470E 01	1.1398E 01	1.1281E 01	1.1132E 01
6	2.7536E 02	1.8598E 01	1.7279E 01	1.6973E 01	1.6558E 01	1.6210E 01
7	2.1445E 02	1.1992E 01	1.1506E 01	1.1381E 01	1.1197E 01	1.1031E 01
8	1.6702E 02	1.6463E 01	1.5919E 01	1.5743E 01	1.5465E 01	1.5198E 01
9	1.3007E 02	2.5917E 01	2.2408E 01	2.1584E 01	2.0452E 01	1.9496E 01
10	1.0130E 02	1.5508E 01	1.4723E 01	1.4534E 01	1.4267E 01	1.4016E 01
11	7.8893E 01	7.8235E 00	7.3274E 00	7.2308E 00	7.1316E 00	7.1265E 00
12	6.1442E 01	9.9728E 00	9.9573E 00	9.9488E 00	9.9282E 00	9.8991E 00
13	4.7851E 01	4.1466E 01	3.8587E 01	3.7792E 01	3.6587E 01	3.5395E 01
14	3.7266E 01	5.1011E 01	4.0028E 01	3.7897E 01	3.5601E 01	3.5114E 01
15	2.9023E 01	1.1186E 01	1.1025E 01	1.0997E 01	1.0995E 01	1.1073E 01
16	2.2603E 01	4.3396E 01	4.5141E 01	4.6073E 01	4.7952E 01	5.0547E 01
17	1.7603E 01	4.8527E 00	4.7991E 00	4.7857E 00	4.7594E 00	4.7536E 00
18	1.3710E 01	9.1312E 00	9.1327E 00	9.1331E 00	9.1336E 00	9.1342E 00
19	1.0677E 01	9.6830E 00	9.6889E 00	9.6913E 00	9.6944E 00	9.6973E 00
20	8.3153E 00	1.0828E 01	1.0816E 01	1.0813E 01	1.0807E 01	1.0801E 01
21	6.4760E 00	9.3085E 00	9.1073E 00	9.0735E 00	9.0357E 00	9.0388E 00
22	5.0435E 00	7.8989E 00	7.8932E 00	7.8912E 00	7.8878E 00	7.8849E 00
23	3.9279E 00	8.3458E 00	8.3396E 00	8.3383E 00	8.3357E 00	8.3339E 00
24	3.0590E 00	8.5865E 00	8.5896E 00	8.5904E 00	8.5916E 00	8.5926E 00
25	2.3824E 00	8.6603E 00	8.6510E 00	8.6513E 00	8.6618E 00	8.6624E 00
26	1.8554E 00	8.7090E 00	8.7092E 00	8.7092E 00	8.7094E 00	8.7096E 00
27	1.4450E 00	8.8771E 00	8.8771E 00	8.8771E 00	8.8771E 00	8.8772E 00
28	1.1254E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200F 00
29	8.7640E-01	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
30	6.8260E-01	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
31	5.3160E-01	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00
32	4.1400E-01	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00	9.1200E 00

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

CAPTURE CROSS-SECTIONS, BARNS, MATL W-184

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	8.7362E-01	7.5026E-01	7.1851E-01	6.7060E-01	6.2245E-01
2	7.4852E 02	9.5854E-01	8.0568E-01	7.5959E-01	6.8184E-01	5.9393E-01
3	5.8295E 02	6.8632E-01	6.3324E-01	6.1822E-01	5.8963E-01	5.4568E-01
4	4.5400E 02	6.5483E-03	6.5289E-03	6.5203E-03	6.5054E-03	6.4918E-03
5	3.5358E 02	8.3235E-01	7.0011E-01	6.6952E-01	6.3046E-01	6.0888E-01
6	2.7536E 02	9.4181E-01	8.3960E-01	8.1571E-01	7.8375E-01	7.4978E-01
7	2.1445E 02	8.7561E-01	7.5254E-01	7.2049E-01	6.7481E-01	6.3358E-01
8	1.6702E 02	5.0622E 00	4.2957E 00	4.1104E 00	3.9533E 00	3.6355E 00
9	1.3007E 02	3.6272E-01	3.6376E-01	3.6413E-01	3.6447E-01	3.6343E-01
10	1.0130E 02	1.1164E 00	8.4278E-01	7.7345E-01	6.8931E-01	6.1219E-01
11	7.8893E 01	9.9066E-02	9.2443E-02	9.0205E-02	8.6157E-02	8.0931E-02
12	6.1442E 01	4.6750E-02	4.6803E-02	4.6826E-02	4.6870E-02	4.6901E-02
13	4.7851E 01	4.1058E-02	4.1090E-02	4.1100E-02	4.1114E-02	4.1127E-02
14	3.7266E 01	3.9076E-02	3.9068E-02	3.9065E-02	3.9062E-02	3.9061E-02
15	2.9023E 01	3.9365E-02	3.9359E-02	3.9358E-02	3.9358E-02	3.9362E-02
16	2.2603E 01	4.0891E-02	4.0829E-02	4.0804E-02	4.0759E-02	4.0699E-02
17	1.7603E 01	4.2747E-02	4.2700E-02	4.2589E-02	4.2574E-02	4.2661E-02
18	1.3710E 01	4.7414E-02	4.7505E-02	4.7525E-02	4.7556E-02	4.7584E-02
19	1.0677E 01	5.1379E-02	5.1450E-02	5.1475E-02	5.1515E-02	5.1555E-02
20	8.3153E 00	5.6509E-02	5.6494E-02	5.6493E-02	5.6485E-02	5.6479E-02
21	6.4760E 00	6.3233E-02	6.3347E-02	6.3383E-02	6.3424E-02	6.3450E-02
22	5.0435E 00	6.9787E-02	6.9727E-02	6.9705E-02	5.9669E-02	6.9634E-02
23	3.9279E 00	7.6021E-02	7.5831E-02	7.5784E-02	7.5719E-02	7.5664E-02
24	3.0590E 00	8.8762E-02	8.9053E-02	8.9137E-02	8.9260E-02	8.9355E-02
25	2.3824E 00	9.9020E-02	9.9145E-02	9.9195E-02	9.9286E-02	9.9397E-02
26	1.8554E 00	1.1191E-01	1.1197E-01	1.1200E-01	1.1206E-01	1.1213E-01
27	1.4450E 00	1.2535E-01	1.2535E-01	1.2535E-01	1.2535E-01	1.2535E-01
28	1.1254E 00	1.4167E-01	1.4165E-01	1.4165E-01	1.4164E-01	1.4162E-01
29	8.7640E-01	1.6074E-01	1.6069E-01	1.6067E-01	1.6062E-01	1.6056E-01
30	6.8260E-01	1.8166E-01	1.8159E-01	1.8155E-01	1.8149E-01	1.8141E-01
31	5.3160E-01	2.0477E-01	2.0471E-01	2.0468E-01	2.0464E-01	2.0458E-01
32	4.1400E-01	2.3235E-01	2.3222E-01	2.3217E-01	2.3207E-01	2.3194E-01

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

SCATTER CROSS-SECTIONS, BARNS, MATL W-184

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	2.2062E 01	1.9979E 01	1.9242E 01	1.8104E 01	1.7009E 01
2	7.4852E 02	1.3260E 01	1.1560E 01	1.1225E 01	1.0563E 01	9.9787E 00
3	5.8295E 02	1.1136E 01	1.0750E 01	1.0652E 01	1.0477E 01	1.0232E 01
4	4.5400E 02	9.1562E 00	9.1567E 00	9.1570E 00	9.1577E 00	9.1588E 00
5	3.5358E 02	9.4564E 00	9.3631E 00	9.3417E 00	9.3155E 00	9.3023E 00
6	2.7536E 02	1.0623E 01	1.0415E 01	1.0361E 01	1.0279E 01	1.0203E 01
7	2.1445E 02	1.8904E 01	1.8879E 01	1.8879E 01	1.8882E 01	1.8873E 01
8	1.6702E 02	7.9801E 01	5.9985E 01	5.7821E 01	6.5012E 01	6.2899E 01
9	1.3007E 02	1.2952E 00	1.3079E 00	1.3118E 00	1.3138E 00	1.3302E 00
10	1.0130E 02	4.1477E 00	4.1138E 00	4.1044E 00	4.0895E 00	4.0727E 00
11	7.8893E 01	6.8357E 00	6.9154E 00	6.9511E 00	7.0317E 00	7.1763E 00
12	6.1442E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
13	4.7851E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
14	3.7266E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
15	2.9023E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
16	2.2603E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
17	1.7603E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
18	1.3710E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
19	1.0677E 01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
20	8.3153E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
21	6.4760E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
22	5.0435E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
23	3.9279E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
24	3.0590E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
25	2.3824E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
26	1.8554E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
27	1.4450E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
28	1.1254E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
29	8.7640E-01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
30	6.8260E-01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
31	5.3160E-01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00
32	4.1400E-01	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00	9.1400E 00

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

CAPTURE CROSS-SECTIONS, BARNS, MATL W-184

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	8.1642E-01	6.9029E-01	6.5534E-01	6.0397E-01	5.5257E-01
2	7.4852E 02	4.6462E-01	4.2749E-01	4.1497E-01	3.9219E-01	3.6553E-01
3	5.8295E 02	1.1107E 00	9.5118E-01	9.0595E-01	8.2997E-01	7.3773E-01
4	4.5400E 02	1.0564E 00	9.2524E-01	8.9504E-01	8.5257E-01	8.1371E-01
5	3.5358E 02	6.7509E-01	5.8378E-01	5.6319E-01	5.3491E-01	5.1271E-01
6	2.7536E 02	1.0795E 00	9.3234E-01	8.9984E-01	8.5551E-01	8.1290E-01
7	2.1445E 02	2.4100E 00	2.1474E 00	2.0963E 00	2.0341E 00	1.9799E 00
8	1.6702E 02	3.6458E 00	3.4185E 00	3.3525E 00	3.2440E 00	3.1283E 00
9	1.3007E 02	7.1787E-02	7.2587E-02	7.2834E-02	7.3128E-02	7.2985E-02
10	1.0130E 02	1.1110E-01	1.0451E-01	1.0140E-01	9.5540E-02	8.8811E-02
11	7.8893E 01	1.4248E-02	1.4205E-02	1.4187E-02	1.4147E-02	1.4080E-02
12	6.1442E 01	1.2576E-02	1.2582E-02	1.2584E-02	1.2588E-02	1.2592E-02
13	4.7851E 01	1.2062E-02	1.2063E-02	1.2063E-02	1.2064E-02	1.2064E-02
14	3.7266E 01	6.4949E-01	6.6442E-01	6.6879E-01	6.7545E-01	6.8127E-01
15	2.9023E 01	1.9102E 00	1.8942E 00	1.8914E 00	1.8915E 00	1.9000E 00
16	2.2603E 01	1.0856E 01	1.0359E 01	1.0160E 01	9.7779E 00	9.2754E 00
17	1.7603E 01	2.1341E 02	1.9593E 02	1.9316E 02	1.8787E 02	1.8306E 02
18	1.3710E 01	5.0009E 01	4.7165E 01	4.6531E 01	4.5551E 01	4.4859E 01
19	1.0677E 01	1.3212E 01	1.3052E 01	1.2997E 01	1.2910E 01	1.2823E 01
20	8.3153E 00	7.4861E 00	7.4919E 00	7.4932E 00	7.4948E 00	7.4968E 00
21	6.4760E 00	5.5306E 00	5.5152E 00	5.5109E 00	5.5055E 00	5.5031E 00
22	5.0435E 00	4.8732E 00	4.8763E 00	4.8775E 00	4.8794E 00	4.8811E 00
23	3.9279E 00	4.6177E 00	4.6215E 00	4.6225E 00	4.6239E 00	4.6251E 00
24	3.0590E 00	4.5544E 00	4.5563E 00	4.5569E 00	4.5578E 00	4.5585E 00
25	2.3824E 00	4.6848E 00	4.6868E 00	4.6875E 00	4.6890E 00	4.6903E 00
26	1.8554E 00	4.9523E 00	4.9537E 00	4.9543E 00	4.9556E 00	4.9574E 00
27	1.4450E 00	5.2884E 00	5.2884E 00	5.2884E 00	5.2885E 00	5.2885E 00
28	1.1254E 00	5.7534E 00	5.7530E 00	5.7528E 00	5.7525E 00	5.7521E 00
29	8.7640E-01	6.3383E 00	6.3367E 00	6.3350E 00	6.3346E 00	6.3327E 00
30	6.8260E-01	7.0078E 00	7.0053E 00	7.0043E 00	7.0022E 00	6.9995E 00
31	5.3160E-01	7.7686E 00	7.7666E 00	7.7658E 00	7.7642E 00	7.7622E 00
32	4.1400E-01	8.6984E 00	8.6940E 00	8.6922E 00	8.6888E 00	8.6845E 00

TABLE V. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

SCATTER CROSS-SECTIONS, BARNS, MATL W-185

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.7528E 01	1.5851E 01	1.5428E 01	1.4824E 01	1.4311E 01
2	7.4852E 02	1.2838E 01	1.2593E 01	1.2475E 01	1.2207E 01	1.1803E 01
3	5.8295E 02	1.1747E 01	1.1483E 01	1.1215E 01	1.1964E 01	1.1576E 01
4	4.5400E 02	1.2415E 01	1.1727E 01	1.1553E 01	1.1282E 01	1.1029E 01
5	3.5358E 02	9.8408E 00	9.7241E 00	9.6985E 00	9.6577E 00	9.6563E 00
6	2.7536E 02	9.6955E 00	9.6595E 00	9.6543E 00	9.6494E 00	9.6447E 00
7	2.1445E 02	3.5585E 01	3.3890E 01	3.3508E 01	3.3297E 01	3.3003E 01
8	1.6702E 02	5.8426E 00	5.5721E 00	5.4803E 00	5.3259E 00	5.1636E 00
9	1.3007E 02	8.8122E 00	8.8118E 00	8.8119E 00	8.8129E 00	8.8173E 00
10	1.0130E 02	9.2189E 00	9.2184E 00	9.2183E 00	9.2182E 00	9.2182E 00
11	7.8893E 01	9.2196E 00	9.2196E 00	9.2196E 00	9.2196E 00	9.2197E 00
12	6.1442E 01	9.2200E 00	9.2200E 00	9.2200E 00	9.2200E 00	9.2200E 00
13	4.7851E 01	9.2200E 00	9.2200E 00	9.2200E 00	9.2200E 00	9.2200E 00
14	3.7266E 01	3.2628E 01	3.2998E 01	3.3099E 01	3.3247E 01	3.3361E 01
15	2.9023E 01	5.4840E 01	5.4500E 01	5.4559E 01	5.4566E 01	5.4707E 01
16	2.2603E 01	1.6285E 02	1.5718E 02	1.5491E 02	1.5057E 02	1.4488E 02
17	1.7603E 01	1.7632E 03	1.6393E 03	1.6109E 03	1.5712E 03	1.5350E 03
18	1.3710E 01	2.5801E 02	2.3970E 02	2.3552E 02	2.2998E 02	2.2491E 02
19	1.0677E 01	3.7168E 01	3.6389E 01	3.6123E 01	3.5899E 01	3.5275E 01
20	8.3153E 00	1.1459E 01	1.1481E 01	1.1485E 01	1.1491E 01	1.1498E 01
21	6.4760E 00	4.3736E 00	4.3234E 00	4.3097E 00	4.2920E 00	4.2846E 00
22	5.0435E 00	2.2147E 00	2.2254E 00	2.2292E 00	2.2357E 00	2.2416E 00
23	3.9279E 00	1.3001E 00	1.3175E 00	1.3220E 00	1.3282F 00	1.3333E 00
24	3.0590E 00	5.6181E-01	5.5184E-01	5.4902E-01	5.4497E-01	5.4185E-01
25	2.3824E 00	3.1867E-01	3.1639E-01	3.1548E-01	3.1381E-01	3.1183E-01
26	1.8554E 00	1.6612E-01	1.6559E-01	1.6536E-01	1.6487E-01	1.6419E-01
27	1.4450E 00	7.6144E-02	7.6138E-02	7.6135E-02	7.6128E-02	7.6111E-02
28	1.1254E 00	2.1042E-02	2.1074E-02	2.1087E-02	2.1114F-02	2.1150E-02
29	8.7640E-01	3.9127E-04	3.9344E-04	3.9437E-04	3.9627E-04	3.9885E-04
30	6.8260E-01	0.	0.	0.	0.	0.
31	5.3160E-01	0.	0.	0.	0.	0.
32	4.1400E-01	0.	0.	0.	0.	0.

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

CAPTURE CROSS SECTION, BARNS, NATURAL TUNGSTEN

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	6.0483E-01	5.7032E-01	5.4589E-01	5.0922E-01	4.7367E-01
2	7.4852E 02	8.3835E-01	7.3404E-01	7.0355E-01	6.5265E-01	5.9355E-01
3	5.8295E 02	6.9586E-01	6.1323E-01	5.9037E-01	5.5173E-01	5.0283E-01
4	4.5400E 02	5.3590E-01	4.6572E-01	4.4836E-01	4.2336E-01	4.0085E-01
5	3.5358E 02	1.2474E 00	1.0728E 00	1.0306E 00	9.7000E-01	9.1370E-01
6	2.7536E 02	2.0546E 00	1.8200E 00	1.7567E 00	1.6952E 00	1.6358E 00
7	2.1445E 02	3.2087E 00	2.8745E 00	2.7941E 00	2.6825E 00	2.5825E 00
8	1.6702E 02	4.2505E 00	3.8182E 00	3.7035E 00	3.5334E 00	3.3771E 00
9	1.3007E 02	1.8665E 00	1.6046E 00	1.5437E 00	1.4618E 00	1.3972E 00
10	1.0130E 02	3.1364E 00	2.6224E 00	2.4952E 00	2.3142E 00	2.1558E 00
11	7.8893E 01	6.8900E-01	5.4118E-01	5.0019E-01	4.3494E-01	3.6407E-01
12	6.1442E 01	5.8707E-01	5.2831E-01	5.1402E-01	4.9492E-01	4.8221E-01
13	4.7851E 01	1.2732E 00	1.0658E 00	1.0340E 00	9.5627E-01	8.7995E-01
14	3.7266E 01	6.4212E 00	5.5020E 00	5.3218E 00	5.1206E 00	5.0514E 00
15	2.9023E 01	1.1770E 00	1.1610E 00	1.1575E 00	1.1554E 00	1.1593E 00
16	2.2603E 01	1.3914E 01	1.3462E 01	1.3367E 01	1.3234E 01	1.3115E 01
17	1.7603E 01	1.1797E 02	1.1209E 02	1.1075E 02	1.0887E 02	1.0716E 02
18	1.3710E 01	1.6034E 01	1.5135E 01	1.4933E 01	1.4652E 01	1.4399E 01
19	1.0677E 01	4.3168E 00	4.2592E 00	4.2528E 00	4.2270E 00	4.2012E 00
20	8.3153E 00	3.1878E 00	3.1791E 00	3.1761E 00	3.1712E 00	3.1659E 00
21	6.4760E 00	1.0887E 01	9.4360E 00	9.1328E 00	8.7090E 00	8.3879E 00
22	5.0435E 00	3.6644E 00	3.6401E 00	3.6313E 00	3.6160E 00	3.6009E 00
23	3.9279E 00	2.6140E 01	2.2543E 01	2.1775E 01	2.0789E 01	1.9998E 01
24	3.0590E 00	1.1111E 01	1.0308E 01	1.0109E 01	9.8456E 00	9.6573E 00
25	2.3824E 00	3.8629E 00	3.8415E 00	3.8332E 00	3.8177E 00	3.7991E 00
26	1.8554E 00	3.0060E 00	3.0045E 00	3.0038E 00	3.0024E 00	3.0004E 00
27	1.4450E 00	2.8264E 00	2.8264E 00	2.8254E 00	2.8264E 00	2.8264E 00
28	1.1254E 00	2.8858E 00	2.8857E 00	2.8855E 00	2.8856E 00	2.8855E 00
29	8.7640E-01	3.0628E 00	3.0522E 00	3.0520E 00	3.0615F 00	3.0609E 00
30	6.8260E-01	3.3083E 00	3.3074E 00	3.3070E 00	3.3062E 00	3.3051E 00
31	5.3160E-01	3.6115E 00	3.6107E 00	3.6104E 00	3.6098E 00	3.6089E 00
32	4.1400E-01	4.0000E 00	3.9981E 00	3.9974E 00	3.9959E 00	3.9941E 00

TABLE V. - Concluded. CODE LISTING AND SAMPLE OUTPUT FOR TUNGSTEN CASES

FULLY DENSE TUNGSTEN SLAB IN LITHIUM HYDRIDE

SCATTER CROSS SECTION, BARNS, NATURAL TUNGSTEN

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.8283E 01	1.6645E 01	1.6211E 01	1.5562E 01	1.4965E 01
2	7.4852E 02	1.2750E 01	1.1665E 01	1.1353E 01	1.0858E 01	1.0315E 01
3	5.8295E 02	1.2724E 01	1.1729E 01	1.1453E 01	1.1000E 01	1.0489E 01
4	4.5400E 02	1.1230E 01	1.0741E 01	1.0518E 01	1.0439E 01	1.0279E 01
5	3.5358E 02	1.0687E 01	1.0412E 01	1.0351E 01	1.0275E 01	1.0232E 01
6	2.7536E 02	1.2838E 01	1.2544E 01	1.2471E 01	1.2364E 01	1.2255E 01
7	2.1445E 02	3.0410E 01	2.8422E 01	2.8002E 01	2.7469E 01	2.7050E 01
8	1.6702E 02	2.9529E 01	2.6355E 01	2.5535E 01	2.4686E 01	2.3949E 01
9	1.3007E 02	9.6656E 00	9.1665E 00	9.0495E 00	8.8911E 00	8.7666E 00
10	1.0130E 02	1.6104E 01	1.4795E 01	1.4483E 01	1.4051E 01	1.3723E 01
11	7.8893E 01	7.4795E 00	7.4510E 00	7.4705E 00	7.5093E 00	7.6030E 00
12	6.1442E 01	9.3150E 00	9.3113E 00	9.3097E 00	9.3065E 00	9.3019E 00
13	4.7851E 01	1.3807E 01	1.3392E 01	1.3277E 01	1.3103E 01	1.2931E 01
14	3.7266E 01	2.1826E 01	2.0349E 01	2.0071E 01	1.9782E 01	1.9745E 01
15	2.9023E 01	2.2462E 01	2.2366E 01	2.2349E 01	2.2350E 01	2.2401E 01
16	2.2603E 01	6.2393E 01	6.0838E 01	6.0248E 01	5.9134E 01	5.7691E 01
17	1.7603E 01	5.5398E 02	5.1847E 02	5.1033E 02	4.9895E 02	4.8857E 02
18	1.3710E 01	7.8364E 01	7.3165E 01	7.2305E 01	7.0405E 01	6.8965E 01
19	1.0677E 01	1.6840E 01	1.6640E 01	1.6570E 01	1.6462E 01	1.6352E 01
20	8.3153E 00	1.0027E 01	1.0031E 01	1.0032E 01	1.0033E 01	1.0034E 01
21	6.4760E 00	8.1237E 00	8.0843E 00	8.0751E 00	8.0673E 00	8.0667E 00
22	5.0435E 00	7.6708E 00	7.6667E 00	7.6651E 00	7.6625E 00	7.6601E 00
23	3.9279E 00	9.0491E 00	8.9227E 00	8.8931E 00	8.8536E 00	8.8212E 00
24	3.0590E 00	5.4524E 00	5.4858E 00	5.4947E 00	5.5071E 00	5.5164E 00
25	2.3824E 00	5.9324E 00	5.9351E 00	5.9362E 00	5.9382E 00	5.9405E 00
26	1.8554E 00	6.0710E 00	6.0714E 00	6.0715E 00	6.0719E 00	6.0724E 00
27	1.4450E 00	6.1502E 00	6.1502E 00	6.1502E 00	6.1502E 00	6.1503E 00
28	1.1254E 00	6.2139E 00	6.2139E 00	6.2139E 00	6.2139E 00	6.2138E 00
29	8.7640E-01	6.2357E 00	6.2356E 00	6.2355E 00	6.2355E 00	6.2355E 00
30	6.8260E-01	6.2539E 00	6.2539E 00	6.2539E 00	6.2538E 00	6.2538E 00
31	5.3160E-01	6.2666E 00	6.2566E 00	6.2565E 00	6.2666E 00	6.2665E 00
32	4.1400E-01	6.2758E 00	6.2757E 00	6.2757E 00	6.2757E 00	6.2757E 00

BROAD GROUP AVERAGED CAPTURE/SCATTER CROSS SECTION

BG NO.	CONTAINS GROUPS	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	1 TO 3	7.3555E-01	6.4166E-01	6.1566E-01	5.7334E-01	5.2542E-01
		1.4495E 01	1.3256E 01	1.2919E 01	1.2393E 01	1.1867E 01
2	4 TO 10	2.1949E 00	1.8630E 00	1.7723E 00	1.6270E 00	1.4564E 00
		1.6484E 01	1.5077E 01	1.4599E 01	1.4095E 01	1.3401E 01
3	11 TO 15	1.5595E 00	1.3271E 00	1.2370E 00	1.0945E 00	9.4121E-01
		1.4075E 01	1.3425E 01	1.3216E 01	1.2833E 01	1.2317E 01
4	16 TO 19	1.4368E 01	1.2558E 01	1.2140E 01	1.1565E 01	1.1066E 01
		6.5001E 01	5.6943E 01	5.4800E 01	5.1807E 01	4.9098E 01
5	20 TO 24	7.8587E 00	6.7395E 00	6.4718E 00	6.1012E 00	5.7853E 00
		8.3071E 00	8.3597E 00	8.3929E 00	8.4344E 00	8.4859E 00
6	25 TO 28	3.1725E 00	3.1574E 00	3.1514E 00	3.1401E 00	3.1261E 00
		6.0828E 00	6.0855E 00	6.0868E 00	6.0890E 00	6.0918E 00
7	29 TO 32	3.4295E 00	3.4231E 00	3.4205E 00	3.4153E 00	3.4089E 00
		6.2552E 00	6.2549E 00	6.2548E 00	6.2545E 00	6.2542E 00

TABLE VI. - CODE LISTING AND SAMPLE OUTPUT FOR DEPLETED URANIUM CASES

```
      DIMENSION  A(12), E(32), F(32,5), AB(32,5,5), SC(32,5,5),
     1   FN(32,5), NAM(2), THICK(5), ABUND(5), ABS(32,5), SCT(32,5),
     2   IGRP(32), BRABS(32,5), BRSCT(32,5)
      DATA NAM/6H U-235,6H U-238/
      DATA THICK/6H   1 CM,6H  2 CM,6H2.54CM,6H  4 CM,6H  8 CM/
C     MANIPULATE GAROL RESONANCE CROSS SECTIONS (GAM-II GROUP SPLIT)
C        FOR FULLY DENSE DEPLETED URANIUM  (0.23PCT U-235)
C     G.P.LAHTI     NASA-LEWIS RESEARCH CENTER    APRIL 1969
C     E(I) IS LOWER ENERGY GROUP BOUND
C     F(I) IS BROAD GROUP FLUX IN ITH GROUP
C     AB(I,J,K) = CAPTURE CROSS SECTION .. ITH GROUP, JTH MATL, KTH CASE
C     SC(I,J,K) = SCATTER CROSS SECTION .. ITH GROUP, JTH MATL, KTH CASE
C     FN(I,  K) = FISSION CROSS SECT U235.. ITH GROUP, KTH CASE
  500 FORMAT(6E12.4)
  501 FORMAT(12A6)
  600 FORMAT( I5, 1P7E12.4)
  602 FORMAT(1H1/ 1H0/ 12A6)
  603 FORMAT(1H0,/19H0  FLUXES BY CASE  //
     1       17H     I  LOW ENERGY, 5(10H      CASE I2)/17X,5(6X,A6))
  604 FORMAT(1H0,/44H0      CAPTURE CROSS-SECTIONS, BARNS,  MATL  A6//
     1       17H     I  LOW ENERGY, 5(10H      CASE I2)/17X,5(6X,A6))
  605 FORMAT(1H0,/44H0      SCATTER CROSS-SECTIONS, BARNS,  MATL  A6//
     1       17H     I  LOW ENERGY, 5(10H      CASE I2)/17X,5(6X,A6))
  606 FORMAT(1H0,/49H0  CAPTURE CROSS SECTION, BARNS, DEPLETED URANIUM//
     1       17H     I  LOW ENERGY, 5(10H      CASE I2)/17X,5(6X,A6))
  607 FORMAT(1H0,/49H0  SCATTER CROSS SECTION, BARNS, DEPLETED URANIUM//
     1       17H     I  LOW ENERGY, 5(10H      CASE I2)/17X,5(6X,A6))
  608 FORMAT(1H0,/45H0      FISSION CROSS-SECTION, BARNS,  U-235   //
     1       17H     I  LOW ENERGY, 5(10H      CASE I2)/17X,5(6X,A6))
      READ(5,500) E
    1 READ(5,501) A
      DO 15 MCASE = 1,5
      READ(5,500) (F(I,MCASE), I=1,32)
      READ(5,500) ( AB(I,1,MCASE), I=1,32)
      READ(5,500) ( SC(I,1,MCASE), I=1,32)
      READ(5,500) ( FN(I,  MCASE), I=1,32)
      READ(5,500) ( AB(I,2,MCASE), I=1,32)
      READ(5,500) ( SC(I,2,MCASE), I=1,32)
   15 CONTINUE
      WRITE(6,602) A
      WRITE(6,603)     (MC,MC=1,5),(THICK(MC),MC=1,5)
      DO 20 I=1,32
   20 WRITE(6,600) I,E(I),(F(I,MC), MC=1,5)
      WRITE(6,602) A
      WRITE(6,608)  (MC,MC=1,5),(THICK(MC),MC=1,5)
      DO 22 I=1,32
   22 WRITE(6,600) I,E(I), (FN(I,MC),MC=1,5)
      DO 35 M=1,2
      WRITE(6,602) A
      WRITE(6,604) NAM(M), (MC,MC=1,5),(THICK(MC),MC=1,5)
      DO 25 I=1,32
   25 WRITE(6,600) I,E(I), (AB(I,M, MC),MC=1,5)
      WRITE(6,602) A
      WRITE(6,605) NAM(M), (MC,MC=1,5),(THICK(MC),MC=1,5)
      DO 30 I=1,32
   30 WRITE(6,600) I,E(I), (SC(I,M,MC),MC=1,5)
   35 CONTINUE
C     MIX DEPLETED URANIUM
      ABUND(1)= 0.0023
      ABUND(2)= 0.9977
      DO 36 MC=1,5
      DO 36 I=1,32
      ABS(I,MC)=0.0
      SCT(I,MC)=0.0
      DO 36 MT=1,2
      ABS(I,MC)=ABS(I,MC) + ABUND(MT)*AB(I,MT,MC)
   36 SCT(I,MC)=SCT(I,MC) + ABUND(MT)*SC(I,MT,MC)
      WRITE(6,602) A
      WRITE(6,606)     (MC,MC=1,5),(THICK(MC),MC=1,5)
      DO 37 I=1,32
   37 WRITE(6,600) I,E(I), (ABS(I,MC), MC=1,5)
      WRITE(6,602) A
      WRITE(6,607)     (MC,MC=1,5),(THICK(MC),MC=1,5)
      DO 39 I=1,32
   39 WRITE(6,600) I,E(I), (SCT(I,MC), MC=1,5)
C     FEW GROUP AVERAGE
      READ(5,505) NBG,IGRP
  505 FORMAT(3612)
C     NBG IS THE NUMBER OF BROAD GROUPS CONSIDERED
C     IGRP(N)= NO. OF THE 32 FINE GRPS IN EACH BROAD GROUP
C     I.E.  IF THE FIRST BROAD GROUP IS TO CONTAIN THE FIRST THREE
C     GROUPS OF THE ORIGINAL 32,  THEN IGRP(1)=3,  ET CETERA
      WRITE(6,618)  (MC,MC=1,5),  (THICK(MC),MC=1,5)
  618 FORMAT(1H1/52H0BROAD GROUP AVERAGED CAPTURE/SCATTER CROSS SECTION
     1   /27H0BG NO.    CONTAINS GROUPS    ,
     2  5(10H      CASE I2)  /  27X, 5(6X,A6))
      ILOW=1
      DO 75 N=1,NBG
      IHIGH=ILOW+IGRP(N)-1
      IF(IHIGH.GT.32)  CALL EXIT
      DO 50 MC=1,5
      FF=0.0
      C=0.0
      S=0.0
      DO 45 I=ILOW,IHIGH
      FF=FF+F(I,MC)
      C=C+ABS(I,MC)*F(I,MC)
   45 S=S+SCT(I,MC)*F(I,MC)
      BRABS(N,MC)=C/FF
   50 BRSCT(N,MC)=S/FF
      WRITE(6,609)N,ILOW,IHIGH,(BRABS(N,MC),MC=1,5),(BRSCT(N,MC),MC=1,5)
  609 FORMAT(1H0,I6,I10,2X,24HU,I3,3X,  1P5E12.4/ 27X,1P5E12.4)
   75 ILOW=IHIGH+1
      GO TO 1
      END
```

TABLE VI. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR DEPLETED URANIUM CASES

FULLY DENSE DEPLETED URANIUM SLAB IN HYDROGEN

FLUXES BY CASE

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	2.3632E-01	2.2588E-01	2.2090E-01	2.0860E-01	1.7983E-01
2	7.4852E 02	2.3643E-01	2.2615E-01	2.2114E-01	2.0855E-01	1.7984E-01
3	5.8295E 02	2.3707E-01	2.2724E-01	2.2232E-01	2.0979E-01	1.8073E-01
4	4.5400E 02	2.3706E-01	2.2841E-01	2.2412E-01	2.1304E-01	1.8592E-01
5	3.5358E 02	2.3613E-01	2.2699E-01	2.2238E-01	2.1044E-01	1.8203E-01
6	2.7536E 02	2.3867E-01	2.3100E-01	2.2720E-01	2.1742E-01	1.9365E-01
7	2.1445E 02	2.3629E-01	2.2702E-01	2.2229E-01	2.1008E-01	1.8119E-01
8	1.6702E 02	2.2860E-01	2.1295E-01	2.0552E-01	1.8827E-01	1.5267E-01
9	1.3007E 02	2.3578E-01	2.2659E-01	2.2188E-01	2.0936E-01	1.7807E-01
10	1.0130E 02	2.0716E-01	1.8963E-01	1.8221E-01	1.6609E-01	1.3738E-01
11	7.8893E 01	2.2929E-01	2.1364E-01	2.0507E-01	1.8762E-01	1.4836E-01
12	6.1442E 01	2.1163E-01	1.9301E-01	1.8438E-01	1.6392E-01	1.2354E-01
13	4.7851E 01	2.4357E-01	2.3726E-01	2.3357E-01	2.2328E-01	1.9343E-01
14	3.7266E 01	2.1587E-01	1.9995E-01	1.9338E-01	1.7940E-01	1.5463E-01
15	2.9023E 01	1.8694E-01	1.6579E-01	1.5592E-01	1.3736E-01	1.0136E-01
16	2.2603E 01	2.3155E-01	2.1691E-01	2.0972E-01	1.9230E-01	1.5617E-01
17	1.7603E 01	1.5396E-01	1.2592E-01	1.1511E-01	9.3532E-02	6.1309E-02
18	1.3710E 01	2.3912E-01	2.2932E-01	2.2405E-01	2.0979E-01	1.7407E-01
19	1.0677E 01	2.4093E-01	2.3252E-01	2.2801E-01	2.1599E-01	1.8667E-01
20	8.3153E 00	2.3045E-01	2.1540E-01	2.0823E-01	1.9147E-01	1.5877E-01
21	6.4760E 00	1.2664E-01	1.0105E-01	9.1534E-02	7.3205E-02	4.7763E-02
22	5.0435E 00	1.5960E-01	1.2470E-01	1.1159E-01	8.6514E-02	5.2757E-02
23	3.9279E 00	2.2814E-01	2.0944E-01	2.0009E-01	1.7723E-01	1.3184E-01
24	3.0590E 00	2.3614E-01	2.2373E-01	2.1724E-01	2.0039E-01	1.6200E-01
25	2.3824E 00	2.3897E-01	2.2914E-01	2.2395E-01	2.1026E-01	1.7722E-01
26	1.8554E 00	2.4108E-01	2.3241E-01	2.2777E-01	2.1539E-01	1.8519E-01
27	1.4450E 00	2.4288E-01	2.3494E-01	2.3055E-01	2.1903E-01	1.9026E-01
28	1.1254E 00	2.4123E-01	2.3195E-01	2.2702E-01	2.1407E-01	1.8331E-01
29	8.7640E-01	2.4230E-01	2.3219E-01	2.2683E-01	2.1279E-01	1.7992E-01
30	6.8260E-01	2.4428E-01	2.3510E-01	2.3017E-01	2.1706E-01	1.8533E-01
31	5.3160E-01	2.4430E-01	2.3451E-01	2.2931E-01	2.1554E-01	1.8284E-01
32	4.1400E-01	2.4358E-01	2.3265E-01	2.2688E-01	2.1181E-01	1.7691E-01

FULLY DENSE DEPLETED URANIUM SLAB IN HYDROGEN

FISSION CROSS-SECTION, BARNS, U-235

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	0.	0.	0.	0.	0.
6	2.7536E 02	0.	0.	0.	0.	0.
7	2.1445E 02	0.	0.	0.	0.	0.
8	1.6702E 02	0.	0.	0.	0.	0.
9	1.3007E 02	4.8810E 00	5.0049E 00	5.0538E 00	5.2000E 00	5.4479E 00
10	1.0130E 02	5.2428E 00	5.2396E 00	5.2374E 00	5.2210E 00	5.1594E 00
11	7.8893E 01	6.2361E 00	6.1957E 00	6.1880E 00	6.1843E 00	6.1935E 00
12	6.1442E 01	1.2623E 01	1.3080E 01	1.3248E 01	1.3545E 01	1.3875E 01
13	4.7851E 01	2.8775E 01	2.8662E 01	2.8625E 01	2.8558E 01	2.8374E 01
14	3.7266E 01	2.0068E 01	1.9670E 01	1.9473E 01	1.9044E 01	1.8372E 01
15	2.9023E 01	5.2024E 01	4.8634E 01	4.7150E 01	4.4093E 01	3.9450E 01
16	2.2603E 01	3.4554E 01	3.4300E 01	3.4184E 01	3.3927E 01	3.3527E 01
17	1.7603E 01	6.1991E 01	6.1646E 01	6.1133E 01	5.9535E 01	5.6115E 01
18	1.3710E 01	2.9183E 01	2.9187E 01	2.9199E 01	2.9247E 01	2.9393E 01
19	1.0677E 01	3.4308E 01	3.3599E 01	3.3384E 01	3.3100E 01	3.3039E 01
20	8.3153E 00	1.2891E 02	1.2255E 02	1.1997E 02	1.1482E 02	1.0750E 02
21	6.4760E 00	1.5417E 01	1.4788E 01	1.4643E 01	1.4473E 01	1.4389E 01
22	5.0435E 00	1.1084E 01	9.5865E 00	9.1425E 00	8.4297E 00	7.6840E 00
23	3.9279E 00	6.4504E 00	6.3424E 00	6.2888E 00	6.1591E 00	5.9084E 00
24	3.0590E 00	3.3466E 01	3.3381E 01	3.3347E 01	3.3285E 01	3.3223E 01
25	2.3824E 00	1.0210E 01	1.0200E 01	1.0193E 01	1.0168E 01	1.0097E 01
26	1.8554E 00	6.4863E 00	6.4720E 00	6.4552E 00	6.4547E 00	6.4422E 00
27	1.4450E 00	3.5034E 00	3.5036E 00	3.5038E 00	3.5045E 00	3.5072E 00
28	1.1254E 00	3.5081E 01	3.4949E 01	3.4881E 01	3.4713E 01	3.4369E 01
29	8.7640E-01	4.0298E 01	4.0102E 01	4.0005E 01	3.9781E 01	3.9381E 01
30	6.8260E-01	7.2465E 00	7.2476E 00	7.2431E 00	7.2491E 00	7.2500E 00
31	5.3160E-01	6.4742E 00	6.4725E 00	6.4718E 00	6.4697E 00	6.4650E 00
32	4.1400E-01	1.3243E 01	1.3227E 01	1.3219E 01	1.3197E 01	1.3146E 01

TABLE VI. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR DEPLETED URANIUM CASES

FULLY DENSE DEPLETED URANIUM SLAB IN HYDROGEN

CAPTURE CROSS-SECTIONS, BARNS, MATL U-235

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	0.	0.	0.	0.	0.
6	2.7536E 02	0.	0.	0.	0.	0.
7	2.1445E 02	0.	0.	0.	0.	0.
8	1.6702E 02	0.	0.	0.	0.	0.
9	1.3007E 02	6.1546E 00	6.3086E 00	6.3818E 00	6.5529E 00	6.8739E 00
10	1.0130E 02	6.9262E 00	6.8706E 00	6.8231E 00	6.6705E 00	6.3019E 00
11	7.8893E 01	1.3864E 01	1.4107E 01	1.4210E 01	1.4412E 01	1.4614E 01
12	6.1442E 01	1.2716E 01	1.3036E 01	1.3150E 01	1.3336E 01	1.3496E 01
13	4.7851E 01	2.3693E 01	2.3680E 01	2.3691E 01	2.3748E 01	2.3907E 01
14	3.7266E 01	2.3937E 01	2.3883E 01	2.3803E 01	2.3563E 01	2.3087E 01
15	2.9023E 01	4.3767E 01	4.2479E 01	4.1818E 01	4.0293E 01	3.7629E 01
16	2.2603E 01	3.4687E 01	3.4153E 01	3.3924E 01	3.3447E 01	3.2750E 01
17	1.7603E 01	4.1953E 01	4.1212E 01	4.0669E 01	3.9204E 01	3.6387E 01
18	1.3710E 01	2.8563E 01	2.8582E 01	2.8605E 01	2.8688E 01	2.8912E 01
19	1.0677E 01	8.8774E 01	8.7128E 01	8.6541E 01	8.5518E 01	8.4455E 01
20	8.3153E 00	7.1855E 01	5.8339E 01	6.6919E 01	6.4095E 01	6.0104E 01
21	6.4760E 00	1.3893E 01	1.2412E 01	1.2013E 01	1.1424E 01	1.0883E 01
22	5.0435E 00	2.1973E 01	1.7865E 01	1.6804E 01	1.5262E 01	1.3845E 01
23	3.9279E 00	4.2991E 01	4.1945E 01	4.1424E 01	4.0167E 01	3.7734E 01
24	3.0590E 00	2.5788E 01	2.5686E 01	2.5542E 01	2.5551E 01	2.5415E 01
25	2.3824E 00	4.2403E 00	4.2354E 00	4.2318E 00	4.2207E 00	4.1901E 00
26	1.8554E 00	1.8325E 01	1.8272E 01	1.8250E 01	1.8208E 01	1.8162E 01
27	1.4450E 00	2.0245E 00	2.0244E 00	2.0244E 00	2.0243E 00	2.0244E 00
28	1.1254E 00	1.3196E 01	1.3148E 01	1.3123E 01	1.3062E 01	1.2937E 01
29	8.7640E-01	1.5063E 01	1.4996E 01	1.4961E 01	1.4879E 01	1.4733E 01
30	6.8260E-01	2.9930E 00	2.9934E 00	2.9936E 00	2.9939E 00	2.9943E 00
31	5.3160E-01	2.7023E 00	2.7017E 00	2.7014E 00	2.7007E 00	2.6990E 00
32	4.1400E-01	5.0927E 00	5.0870E 00	5.0840E 00	5.0762E 00	5.0583E 00

FULLY DENSE DEPLETED URANIUM SLAB IN HYDROGEN

SCATTER CROSS-SECTIONS, BARNS, MATL U-235

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
2	7.4852E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
3	5.8295E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
4	4.5400E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
5	3.5358E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
6	2.7536E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
7	2.1445E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
8	1.6702E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
9	1.3007E 02	1.1377E 01	1.1398E 01	1.1407E 01	1.1426E 01	1.1458E 01
10	1.0130E 02	1.0882E 01	1.0856E 01	1.0843E 01	1.0811E 01	1.0748E 01
11	7.8893E 01	1.1603E 01	1.1633E 01	1.1645E 01	1.1669E 01	1.1695E 01
12	6.1442E 01	1.1148E 01	1.1164E 01	1.1173E 01	1.1179E 01	1.1183E 01
13	4.7851E 01	1.1775E 01	1.1767E 01	1.1763E 01	1.1752E 01	1.1717E 01
14	3.7266E 01	1.1675E 01	1.1624E 01	1.1593E 01	1.1548E 01	1.1464E 01
15	2.9023E 01	1.1676E 01	1.1399E 01	1.1294E 01	1.1096E 01	1.0833E 01
16	2.2603E 01	1.1450E 01	1.1445E 01	1.1442E 01	1.1435E 01	1.1421E 01
17	1.7603E 01	1.2345E 01	1.2124E 01	1.2025E 01	1.1818E 01	1.1521E 01
18	1.3710E 01	1.0794E 01	1.0798E 01	1.0800E 01	1.0807E 01	1.0821E 01
19	1.0677E 01	1.2406E 01	1.2390E 01	1.2388E 01	1.2390E 01	1.2407E 01
20	8.3153E 00	1.3291E 01	1.3245E 01	1.3232E 01	1.3213E 01	1.3194E 01
21	6.4760E 00	9.0566E 00	8.9640E 00	8.9321E 00	8.8766E 00	8.8111E 00
22	5.0435E 00	9.7609E 00	9.7969E 00	9.8117E 00	9.8392E 00	9.8717E 00
23	3.9279E 00	9.8622E 00	9.8692E 00	9.8727E 00	9.8812E 00	9.8976E 00
24	3.0590E 00	1.0191E 01	1.0191E 01	1.0190E 01	1.0190E 01	1.0188E 01
25	2.3824E 00	9.9837E 00	9.9839E 00	9.9840E 00	9.9844E 00	9.9854E 00
26	1.8554E 00	1.0250E 01	1.0250E 01	1.0250E 01	1.0250E 01	1.0250E 01
27	1.4450E 00	1.0265E 01	1.0265E 01	1.0265E 01	1.0265E 01	1.0265E 01
28	1.1254E 00	1.0408E 01	1.0408E 01	1.0408E 01	1.0408E 01	1.0408E 01
29	8.7640E-01	1.0177E 01	1.0177E 01	1.0177E 01	1.0177E 01	1.0177E 01
30	6.8260E-01	1.0208E 01	1.0208E 01	1.0208E 01	1.0208E 01	1.0208E 01
31	5.3160E-01	1.0271E 01	1.0271E 01	1.0271E 01	1.0271E 01	1.0271E 01
32	4.1400E-01	1.0322E 01	1.0322E 01	1.0322E 01	1.0322E 01	1.0322E 01

TABLE VI. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR DEPLETED URANIUM CASES

FULLY DENSE DEPLETED URANIUM SLAB IN LITHIUM HYDRIDE

CAPTURE CROSS-SECTIONS, BARNS, MATL U-238

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	7.0375E-01	6.0423E-01	5.8351E-01	5.4716E-01	5.1766E-01
2	7.4852E 02	8.1351E-01	6.9878E-01	6.6975E-01	6.2852E-01	5.9208E-01
3	5.8295E 02	7.5009E-01	6.4366E-01	6.1890E-01	5.8447E-01	5.5475E-01
4	4.5400E 02	7.6233E-01	5.4887E-01	6.2223E-01	5.8478E-01	5.5141E-01
5	3.5358E 02	6.6728E-01	5.6033E-01	5.3592E-01	5.0252E-01	4.7417E-01
6	2.7536E 02	6.4380E-01	5.5720E-01	5.3744E-01	5.1008E-01	4.8557E-01
7	2.1445E 02	7.3625E-01	6.2582E-01	6.0125E-01	5.6849E-01	5.4320E-01
8	1.6702E 02	1.3655E 00	1.2108E 00	1.1728E 00	1.1189E 00	1.0784E 00
9	1.3007E 02	6.6800E-01	5.4454E-01	5.1553E-01	4.7525E-01	4.3861E-01
10	1.0130E 02	2.4717E 00	2.0360E 00	1.9137E 00	1.7355E 00	1.5259E 00
11	7.8893E 01	1.2361E 00	1.0834E 00	1.0433E 00	1.0003E 00	9.6443E-01
12	6.1442E 01	2.2430E 00	1.8221E 00	1.7156E 00	1.5644E 00	1.4431E 00
13	4.7851E 01	7.9976E-02	7.9295E-02	7.8890E-02	7.7731E-02	7.4757E-02
14	3.7266E 01	1.4659E 00	1.2395E 00	1.1598E 00	1.0511E 00	9.3707E-01
15	2.9023E 01	4.6275E 00	3.4337E 00	3.1208E 00	2.6448E 00	2.1835E 00
16	2.2603E 01	6.6963E-01	6.5576E-01	6.5134E-01	6.4042E-01	6.2516E-01
17	1.7603E 01	7.9241E 00	6.2434E 00	5.8140E 00	5.1873E 00	4.6441E 00
18	1.3710E 01	3.7405E-01	3.7255E-01	3.7158E-01	3.6921E-01	3.6296E-01
19	1.0677E 01	1.7505E-01	1.7503E-01	1.7533E-01	1.7535E-01	1.7512E-01
20	8.3153E 00	6.4146E-01	6.3125E-01	6.2622E-01	6.1471E-01	5.9563E-01
21	6.4760E 00	1.2019E 01	9.1337E 00	8.4369E 00	7.4252E 00	6.4551E 00
22	5.0435E 00	7.1244E 00	6.0797E 00	5.7859E 00	5.3340E 00	4.8912E 00
23	3.9279E 00	1.1678E 00	1.1591E 00	1.1548E 00	1.1442E 00	1.1235E 00
24	3.0590E 00	6.5513E-01	6.5487E-01	6.5473E-01	6.5435E-01	6.5344E-01
25	2.3824E 00	5.1687E-01	5.1683E-01	5.1593E-01	5.1671E-01	5.1646E-01
26	1.8554E 00	4.6942E-01	4.6943E-01	4.6942E-01	4.6942E-01	4.6943E-01
27	1.4450E 00	4.5999E-01	4.5999E-01	4.5999E-01	4.5999E-01	4.5999E-01
28	1.1254E 00	4.7078E-01	4.7074E-01	4.7073E-01	4.7069E-01	4.7060E-01
29	8.7640E-01	4.9744E-01	4.9752E-01	4.9755E-01	4.9766E-01	4.9783E-01
30	6.8260E-01	5.3461E-01	5.3460E-01	5.3459E-01	5.3459E-01	5.3459E-01
31	5.3160E-01	5.8222E-01	5.8217E-01	5.8215E-01	5.8209E-01	5.8195E-01
32	4.1400E-01	6.4026E-01	6.4017E-01	6.4012E-01	6.3999E-01	6.3969E-01

FULLY DENSE DEPLETED URANIUM SLAB IN LITHIUM HYDRIDE

SCATTER CROSS-SECTIONS, BARNS, MATL U-238

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.2186E 01	1.1696E 01	1.1555E 01	1.1324E 01	1.1047E 01
2	7.4852E 02	1.1217E 01	1.0848E 01	1.0748E 01	1.0583E 01	1.0388E 01
3	5.8295E 02	1.1794E 01	1.1476E 01	1.1387E 01	1.1242E 01	1.1076E 01
4	4.5400E 02	1.1081E 01	1.0924E 01	1.0834E 01	1.0823E 01	1.0763E 01
5	3.5358E 02	1.1486E 01	1.1432E 01	1.1420E 01	1.1403E 01	1.1387E 01
6	2.7536E 02	1.1249E 01	1.1021E 01	1.0957E 01	1.0850E 01	1.0720E 01
7	2.1445E 02	1.1454E 01	1.1290E 01	1.1249E 01	1.1189E 01	1.1126E 01
8	1.6702E 02	1.3063E 01	1.2014E 01	1.1718E 01	1.1239E 01	1.0723E 01
9	1.3007E 02	1.0925E 01	1.0920E 01	1.0921E 01	1.0925E 01	1.0934E 01
10	1.0130E 02	1.7526E 01	1.6626E 01	1.6389E 01	1.6007E 01	1.5538E 01
11	7.8893E 01	7.8742E 00	7.8950E 00	7.9117E 00	7.9581E 00	8.0626E 00
12	6.1442E 01	1.3395E 01	1.3160E 01	1.3138E 01	1.3169E 01	1.3353E 01
13	4.7851E 01	9.8060E 00	9.8168E 00	9.8232E 00	9.8421E 00	9.8936E 00
14	3.7266E 01	1.8713E 01	1.7984E 01	1.7745E 01	1.7317E 01	1.6765E 01
15	2.9023E 01	7.8140E 00	7.0682E 00	6.9219E 00	6.7605E 00	6.7265E 00
16	2.2603E 01	1.2564E 01	1.2505E 01	1.2473E 01	1.2418E 01	1.2325E 01
17	1.7603E 01	1.1147E 01	1.0631E 01	1.0520E 01	1.0415E 01	1.0515E 01
18	1.3710E 01	9.0690E 00	9.0728E 00	9.0752E 00	9.0825E 00	9.1023E 00
19	1.0677E 01	1.0867E 01	1.0867E 01	1.0867E 01	1.0867E 01	1.0867E 01
20	8.3153E 00	1.2089E 01	1.2077E 01	1.2071E 01	1.2058E 01	1.2035E 01
21	6.4760E 00	1.5277E 01	1.4877E 01	1.4765E 01	1.4595E 01	1.4417E 01
22	5.0435E 00	7.6783E 00	7.8580E 00	7.9148E 00	8.0090E 00	8.1109E 00
23	3.9279E 00	9.4391E 00	9.4457E 00	9.4490E 00	9.4570E 00	9.4727E 00
24	3.0590E 00	9.8850E 00	9.8853E 00	9.8855E 00	9.8859E 00	9.8870E 00
25	2.3824E 00	1.0355E 01	1.0355E 01	1.0355E 01	1.0356E 01	1.0359E 01
26	1.8554E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
27	1.4450E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
28	1.1254E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
29	8.7640E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
30	6.8260E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
31	5.3160E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
32	4.1400E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01

TABLE VI. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR DEPLETED URANIUM CASES

FULLY DENSE DEPLETED URANIUM SLAB IN LITHIUM HYDRIDE

CAPTURE CROSS-SECTIONS, BARNS, MATL U-235

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	0.	0.	0.	0.	0.
6	2.7536E 02	0.	0.	0.	0.	0.
7	2.1445E 02	0.	0.	0.	0.	0.
8	1.6702E 02	0.	0.	0.	0.	0.
9	1.3007E 02	6.1293E 00	6.2836E 00	6.3569E 00	6.5284E 00	6.8504E 00
10	1.0130E 02	6.9086E 00	6.8524E 00	6.8047E 00	6.6518E 00	6.2826E 00
11	7.8893E 01	1.3894E 01	1.4137E 01	1.4240E 01	1.4443E 01	1.4645E 01
12	6.1442E 01	1.2754E 01	1.3075E 01	1.3139E 01	1.3376E 01	1.3537E 01
13	4.7851E 01	2.3682E 01	2.3670E 01	2.3682E 01	2.3740E 01	2.3903E 01
14	3.7266E 01	2.3882E 01	2.3824E 01	2.3743E 01	2.3501E 01	2.3025E 01
15	2.9023E 01	4.3927E 01	4.2644E 01	4.1983E 01	4.0454E 01	3.7778E 01
16	2.2603E 01	3.4460E 01	3.3930E 01	3.3704E 01	3.3232E 01	3.2546E 01
17	1.7603E 01	4.1830E 01	4.1106E 01	4.0568E 01	3.9106E 01	3.6276E 01
18	1.3710E 01	2.8509E 01	2.8530E 01	2.8554E 01	2.8639E 01	2.8871E 01
19	1.0677E 01	8.8697E 01	8.7057E 01	8.6474E 01	8.5462E 01	8.4417E 01
20	8.3153E 00	7.0943E 01	6.7456E 01	6.6047E 01	6.3239E 01	5.9273E 01
21	6.4760E 00	1.3778E 01	1.2325E 01	1.1933E 01	1.1359E 01	1.0833E 01
22	5.0435E 00	2.2477E 01	1.8252E 01	1.7163E 01	1.5577E 01	1.4123E 01
23	3.9279E 00	4.4112E 01	4.3073E 01	4.2555E 01	4.1301E 01	3.8865E 01
24	3.0590E 00	2.5876E 01	2.5774E 01	2.5730E 01	2.5643E 01	2.5507E 01
25	2.3824E 00	4.3188E 00	4.3137E 00	4.3103E 00	4.2985E 00	4.2665E 00
26	1.8554E 00	1.8155E 01	1.8105E 01	1.8084E 01	1.8046E 01	1.8008E 01
27	1.4450E 00	2.0142E 00	2.0141E 00	2.0140E 00	2.0139E 00	2.0139E 00
28	1.1254E 00	1.2806E 01	1.2759E 01	1.2735E 01	1.2676E 01	1.2554E 01
29	8.7640E-01	1.5894E 01	1.5824E 01	1.5793E 01	1.5711E 01	1.5571E 01
30	6.8260E-01	3.0458E 00	3.0462E 00	3.0463E 00	3.0466E 00	3.0467E 00
31	5.3160E-01	2.6783E 00	2.6777E 00	2.6774E 00	2.6767E 00	2.6751E 00
32	4.1400E-01	4.9333E 00	4.9277E 00	4.9248E 00	4.9170E 00	4.8993E 00

FULLY DENSE DEPLETED URANIUM SLAB IN LITHIUM HYDRIDE

SCATTER CROSS-SECTIONS, BARNS, MATL U-235

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
2	7.4852E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
3	5.8295E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
4	4.5400E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
5	3.5358E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
6	2.7536E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
7	2.1445E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
8	1.6702E 02	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01	1.0569E 01
9	1.3007E 02	1.1376E 01	1.1396E 01	1.1405E 01	1.1425E 01	1.1456E 01
10	1.0130E 02	1.0879E 01	1.0853E 01	1.0843E 01	1.0807E 01	1.0744E 01
11	7.8893E 01	1.1605E 01	1.1634E 01	1.1647E 01	1.1671E 01	1.1697E 01
12	6.1442E 01	1.1149E 01	1.1165E 01	1.1171E 01	1.1183E 01	1.1184E 01
13	4.7851E 01	1.1781E 01	1.1773E 01	1.1769E 01	1.1758E 01	1.1723E 01
14	3.7266E 01	1.1666E 01	1.1615E 01	1.1591E 01	1.1539E 01	1.1455E 01
15	2.9023E 01	1.1696E 01	1.1417E 01	1.1312E 01	1.1111E 01	1.0846E 01
16	2.2603E 01	1.1445E 01	1.1440E 01	1.1437E 01	1.1429E 01	1.1415E 01
17	1.7603E 01	1.2354E 01	1.2134E 01	1.2035E 01	1.1829E 01	1.1532E 01
18	1.3710E 01	1.0790E 01	1.0795E 01	1.0797E 01	1.0804E 01	1.0818E 01
19	1.0677E 01	1.2422E 01	1.2405E 01	1.2404E 01	1.2405E 01	1.2423E 01
20	8.3153E 00	1.3274E 01	1.3227E 01	1.3214E 01	1.3194E 01	1.3173E 01
21	6.4760E 00	9.0445E 00	8.9522E 00	8.9203E 00	8.8650E 00	8.7994E 00
22	5.0435E 00	9.7544E 00	9.7903E 00	9.8053E 00	9.8330E 00	9.8655E 00
23	3.9279E 00	9.8550E 00	9.8620E 00	9.8655E 00	9.8739E 00	9.8902E 00
24	3.0590E 00	1.0195E 01	1.0195E 01	1.0194E 01	1.0194E 01	1.0192E 01
25	2.3824E 00	9.9807E 00	9.9809E 00	9.9811E 00	9.9815E 00	9.9825E 00
26	1.8554E 00	1.0250E 01	1.0250E 01	1.0250E 01	1.0250E 01	1.0250E 01
27	1.4450E 00	1.0262E 01	1.0262E 01	1.0262E 01	1.0262E 01	1.0262E 01
28	1.1254E 00	1.0407E 01	1.0407E 01	1.0407E 01	1.0407E 01	1.0407E 01
29	8.7640E-01	1.0179E 01	1.0179E 01	1.0179E 01	1.0178E 01	1.0178E 01
30	6.8260E-01	1.0205E 01	1.0205E 01	1.0205E 01	1.0205E 01	1.0205E 01
31	5.3160E-01	1.0269E 01	1.0269E 01	1.0269E 01	1.0269E 01	1.0269E 01
32	4.1400E-01	1.0320E 01	1.0320E 01	1.0320E 01	1.0320E 01	1.0320E 01

TABLE VI. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR DEPLETED URANIUM CASES

BROAD GROUP AVERAGED CAPTURE/SCATTER CROSS SECTION

BG NO.	CONTAINS GROUPS	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	1 TO 3	7.5558E-01 1.1730E 01	5.4729E-01 1.1339E 01	5.2153E-01 1.1229E 01	5.8526E-01 1.1049E 01	5.5348E-01 1.0837E 01
2	4 TO 10	1.0192E 00 1.2299E 01	8.5373E-01 1.1917E 01	8.1234E-01 1.1813E 01	7.5393E-01 1.1646E 01	6.9076E-01 1.1466E 01
3	11 TO 15	1.8448E 00 1.1532E 01	1.4509E 00 1.1225E 01	1.3459E 00 1.1162E 01	1.1832E 00 1.1097E 01	1.0137E 00 1.1148E 01
4	16 TO 19	1.8364E 00 1.0870E 01	1.4105E 00 1.0758E 01	1.2966E 00 1.0732E 01	1.1191E 00 1.0700E 01	9.3168E-01 1.0693E 01
5	20 TO 24	3.3852E 00 1.0649E 01	2.6108E 00 1.0619E 01	2.4044E 00 1.0513E 01	2.0823E 00 1.0612E 01	1.7360E 00 1.0635E 01
6	25 TO 28	4.9963E-01 1.0735E 01	4.9948E-01 1.0735E 01	4.9941E-01 1.0735E 01	4.9923E-01 1.0736E 01	4.9882E-01 1.0739E 01
7	29 TO 32	5.7906E-01 1.0857E 01	5.7890E-01 1.0857E 01	5.7881E-01 1.0857E 01	5.7860E-01 1.0857E 01	5.7814E-01 1.0857E 01

FULLY DENSE DEPLETED URANIUM SLAB IN LITHIUM HYDRIDE

FLUXES BY CASE

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	2.3061E-01	2.2015E-01	2.1519E-01	2.0328E-01	1.7552E-01
2	7.4852E 02	2.2916E-01	2.1893E-01	2.1395E-01	2.0182E-01	1.7328E-01
3	5.8295E 02	2.2806E-01	2.1830E-01	2.1346E-01	2.0144E-01	1.7273E-01
4	4.5400E 02	2.2613E-01	2.1755E-01	2.1334E-01	2.0277E-01	1.7608E-01
5	3.5358E 02	2.2310E-01	2.1411E-01	2.0953E-01	1.9834E-01	1.7067E-01
6	2.7536E 02	2.2309E-01	2.1557E-01	2.1187E-01	2.0269E-01	1.7958E-01
7	2.1445E 02	2.1819E-01	2.0925E-01	2.0474E-01	1.9341E-01	1.6586E-01
8	1.6702E 02	2.0817E-01	1.9351E-01	1.8573E-01	1.7081E-01	1.3763E-01
9	1.3007E 02	2.1141E-01	2.0272E-01	1.9831E-01	1.8695E-01	1.5793E-01
10	1.0130E 02	1.8275E-01	1.6598E-01	1.6032E-01	1.4607E-01	1.2013E-01
11	7.8893E 01	1.9820E-01	1.8420E-01	1.7747E-01	1.6136E-01	1.2661E-01
12	6.1442E 01	1.7898E-01	1.6285E-01	1.5543E-01	1.3798E-01	1.0321E-01
13	4.7851E 01	2.0081E-01	1.9504E-01	1.9185E-01	1.8303E-01	1.5728E-01
14	3.7266E 01	1.7344E-01	1.6033E-01	1.5493E-01	1.4363E-01	1.2304E-01
15	2.9023E 01	1.4476E-01	1.2785E-01	1.2378E-01	1.0543E-01	7.7018E-02
16	2.2603E 01	1.7384E-01	1.6238E-01	1.5532E-01	1.4359E-01	1.1571E-01
17	1.7603E 01	1.1064E-01	9.0069E-02	8.2177E-02	6.6574E-02	4.3202E-02
18	1.3710E 01	1.6507E-01	1.5771E-01	1.5384E-01	1.4372E-01	1.1815E-01
19	1.0677E 01	1.5852E-01	1.5246E-01	1.4930E-01	1.4119E-01	1.2114E-01
20	8.3153E 00	1.4379E-01	1.3404E-01	1.2944E-01	1.1893E-01	9.8041E-02
21	6.4760E 00	7.5222E-02	5.9903E-02	5.4205E-02	4.3292E-02	2.8016E-02
22	5.0435E 00	8.6793E-02	6.7320E-02	6.0354E-02	4.6331E-02	2.7871E-02
23	3.9279E 00	1.1582E-01	1.0578E-01	1.0083E-01	8.8966E-02	6.5371E-02
24	3.0590E 00	1.1077E-01	1.0451E-01	1.0131E-01	9.3246E-02	7.4725E-02
25	2.3824E 00	1.0250E-01	9.7902E-02	9.5545E-02	8.9543E-02	7.4939E-02
26	1.8554E 00	9.3703E-02	9.0010E-02	8.8097E-02	8.3209E-02	7.1132E-02
27	1.4450E 00	8.4555E-02	8.1502E-02	7.9911E-02	7.5821E-02	6.5509E-02
28	1.1254E 00	7.4636E-02	7.1529E-02	6.9931E-02	6.5892E-02	5.6184E-02
29	8.7640E-01	6.5531E-02	6.2558E-02	6.1023E-02	5.7167E-02	4.8053E-02
30	6.8260E-01	5.7327E-02	5.4983E-02	5.3754E-02	5.0647E-02	4.3019E-02
31	5.3160E-01	4.9216E-02	4.7093E-02	4.5995E-02	4.3207E-02	3.6499E-02
32	4.1400E-01	4.1646E-02	3.9661E-02	3.8640E-02	3.6063E-02	3.0021E-02

FULLY DENSE DEPLETED URANIUM SLAB IN LITHIUM HYDRIDE

FISSION CROSS-SECTION, BARNS, U-235

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	0.	0.	0.	0.	0.
2	7.4852E 02	0.	0.	0.	0.	0.
3	5.8295E 02	0.	0.	0.	0.	0.
4	4.5400E 02	0.	0.	0.	0.	0.
5	3.5358E 02	0.	0.	0.	0.	0.
6	2.7536E 02	0.	0.	0.	0.	0.
7	2.1445E 02	0.	0.	0.	0.	0.
8	1.6702E 02	0.	0.	0.	0.	0.
9	1.3007E 02	4.8628E 00	4.9869E 00	5.0459E 00	5.1824E 00	5.4312E 00
10	1.0130E 02	5.2378E 00	5.2350E 00	5.2329E 00	5.2167E 00	5.1552E 00
11	7.8893E 01	6.2329E 00	6.1940E 00	6.1869E 00	6.1843E 00	6.1950E 00
12	6.1442E 01	1.2680E 01	1.3137E 01	1.3306E 01	1.3602E 01	1.3932E 01
13	4.7851E 01	2.8823E 01	2.8711E 01	2.8574E 01	2.8607E 01	2.8424E 01
14	3.7266E 01	1.9995E 01	1.9597E 01	1.9401E 01	1.8975E 01	1.8308E 01
15	2.9023E 01	5.2336E 01	4.8932E 01	4.7453E 01	4.4362E 01	3.9684E 01
16	2.2603E 01	3.4432E 01	3.4180E 01	3.4055E 01	3.3810E 01	3.3414E 01
17	1.7603E 01	6.1745E 01	6.1423E 01	6.0915E 01	5.9320E 01	5.5875E 01
18	1.3710E 01	2.9139E 01	2.9143E 01	2.9155E 01	2.9206E 01	2.9354E 01
19	1.0677E 01	3.4480E 01	3.3772E 01	3.3557E 01	3.3277E 01	3.3223E 01
20	8.3153E 00	1.2719E 02	1.2088E 02	1.1832E 02	1.1320E 02	1.0591E 02
21	6.4760E 00	1.5397E 01	1.4787E 01	1.4648E 01	1.4486E 01	1.4413E 01
22	5.0435E 00	1.1293E 01	9.7640E 00	9.3114E 00	8.5858E 00	7.8278E 00
23	3.9279E 00	6.5656E 00	6.4583E 00	6.4350E 00	6.2757E 00	6.0243E 00
24	3.0590E 00	3.3402E 01	3.3317E 01	3.3284E 01	3.3224E 01	3.3167E 01
25	2.3824E 00	1.0404E 01	1.0395E 01	1.0387E 01	1.0362E 01	1.0288E 01
26	1.8554E 00	6.4430E 00	6.4295E 00	6.4240E 00	6.4134E 00	6.4029E 00
27	1.4450E 00	3.4372E 00	3.4373E 00	3.4374E 00	3.4380E 00	3.4406E 00
28	1.1254E 00	3.4010E 01	3.3882E 01	3.3816E 01	3.3653E 01	3.3318E 01
29	8.7640E-01	4.2559E 01	4.2369E 01	4.2276E 01	4.2058E 01	4.1675E 01
30	6.8260E-01	7.3912E 00	7.3923E 00	7.3927E 00	7.3934E 00	7.3936E 00
31	5.3160E-01	6.4067E 00	6.4052E 00	6.4044E 00	6.4023E 00	6.3979E 00
32	4.1400E-01	1.2792E 01	1.2775E 01	1.2767E 01	1.2745E 01	1.2695E 01

TABLE VI. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR DEPLETED URANIUM CASES

FULLY DENSE DEPLETED URANIUM SLAB IN HYDROGEN

CAPTURE CROSS SECTION, BARNS, DEPLETED URANIUM

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	7.0189E-01	6.0265E-01	5.7901E-01	5.4575E-01	5.1538E-01
2	7.4852E 02	8.1641E-01	6.9699E-01	5.5835E-01	5.2691E-01	5.9057E-01
3	5.8295E 02	7.4842E-01	6.4221E-01	6.1750E-01	5.8314E-01	5.5348E-01
4	4.5400E 02	7.6070E-01	6.4750E-01	6.2092E-01	5.8355E-01	5.5027E-01
5	3.5358E 02	6.6529E-01	5.5866E-01	5.3434E-01	5.0102E-01	4.7277E-01
6	2.7536E 02	6.4199E-01	5.5555E-01	5.3594E-01	5.0854E-01	4.8408E-01
7	2.1445E 02	7.3305E-01	6.2309E-01	5.9864E-01	5.6601E-01	5.4081E-01
8	1.6702E 02	1.3590E 00	1.2048E 00	1.1669E 00	1.1131E 00	1.0725E 00
9	1.3007E 02	6.7783E-01	5.5552E-01	5.2583E-01	4.8724E-01	4.5163E-01
10	1.0130E 02	2.4933E 00	2.0567E 00	1.9401E 00	1.7552E 00	1.5446E 00
11	7.8893E 01	1.2679E 00	1.1149E 00	1.0798E 00	1.0320E 00	9.9635E-01
12	6.1442E 01	2.2779E 00	1.8567E 00	1.7502E 00	1.5989E 00	1.4773E 00
13	4.7851E 01	1.3391E-01	1.3321E-01	1.3284E-01	1.3183E-01	1.2927E-01
14	3.7266E 01	1.5335E 00	1.3047E 00	1.2342E 00	1.1140E 00	9.6755E-01
15	2.9023E 01	4.6507E 00	3.4738E 00	3.1645E 00	2.6928E 00	2.2319E 00
16	2.2603E 01	7.5234E-01	7.3806E-01	7.3205E-01	7.1987E-01	7.0277E-01
17	1.7603E 01	7.9215E 00	6.2570E 00	5.8308E 00	5.2070E 00	4.5515E 00
18	1.3710E 01	4.3715E-01	4.3573E-01	4.3492E-01	4.3270E-01	4.2711E-01
19	1.0677E 01	3.7857E-01	3.7477E-01	3.7342E-01	3.7108E-01	3.6873E-01
20	8.3153E 00	8.0976E-01	7.9142E-01	7.8309E-01	7.6502E-01	7.3662E-01
21	6.4760E 00	1.2311E 01	9.3512E 00	8.6352E 00	7.6015E 00	6.6109E 00
22	5.0435E 00	7.0242E 00	5.9976E 00	5.7089E 00	5.2643E 00	4.8285E 00
23	3.9279E 00	1.2542E 00	1.2432E 00	1.2375E 00	1.2243E 00	1.1983E 00
24	3.0590E 00	7.1122E-01	7.1074E-01	7.1049E-01	7.0992E-01	7.0875E-01
25	2.3824E 00	5.2477E-01	5.2470E-01	5.2458E-01	5.2456E-01	5.2425E-01
26	1.8554E 00	5.1026E-01	5.1014E-01	5.1009E-01	5.0998E-01	5.0985E-01
27	1.4450E 00	4.6365E-01	4.6365E-01	4.6355E-01	4.6365E-01	4.6366E-01
28	1.1254E 00	5.0034E-01	5.0019E-01	5.0012E-01	4.9994E-01	4.9956E-01
29	8.7640E-01	5.3194E-01	5.3185E-01	5.3181E-01	5.3172E-01	5.3157E-01
30	6.8260E-01	5.4180E-01	5.4179E-01	5.4178E-01	5.4177E-01	5.4176E-01
31	5.3160E-01	5.8916E-01	5.8911E-01	5.8908E-01	5.8902E-01	5.8887E-01
32	4.1400E-01	6.5316E-01	6.5305E-01	6.5299E-01	6.5285E-01	6.5251E-01

FULLY DENSE DEPLETED URANIUM SLAB IN HYDROGEN

SCATTER CROSS SECTION, BARNS, DEPLETED URANIUM

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.2182E 01	1.1694E 01	1.1554E 01	1.1322E 01	1.1046E 01
2	7.4852E 02	1.1215E 01	1.0848E 01	1.0749E 01	1.0584E 01	1.0389E 01
3	5.8295E 02	1.1792E 01	1.1474E 01	1.1385E 01	1.1239E 01	1.1074E 01
4	4.5400E 02	1.1030E 01	1.0923E 01	1.0883E 01	1.0822E 01	1.0763E 01
5	3.5358E 02	1.1485E 01	1.1431E 01	1.1419E 01	1.1402E 01	1.1387E 01
6	2.7536E 02	1.1248E 01	1.1022E 01	1.0958E 01	1.0851E 01	1.0724E 01
7	2.1445E 02	1.1454E 01	1.1290E 01	1.1253E 01	1.1191E 01	1.1128E 01
8	1.6702E 02	1.3039E 01	1.1994E 01	1.1698E 01	1.1220E 01	1.0704E 01
9	1.3007E 02	1.0926E 01	1.0922E 01	1.0923E 01	1.0926E 01	1.0936E 01
10	1.0130E 02	1.7540E 01	1.6637E 01	1.6399E 01	1.6016E 01	1.5547E 01
11	7.8893E 01	7.9007E 00	7.9212E 00	7.9377E 00	7.9837E 00	8.0873E 00
12	6.1442E 01	1.3379E 01	1.3143E 01	1.3121E 01	1.3150E 01	1.3334E 01
13	4.7851E 01	9.8177E 00	9.8284E 00	9.8347E 00	9.8533E 00	9.9039E 00
14	3.7266E 01	1.8758E 01	1.8022E 01	1.7782E 01	1.7350E 01	1.6795E 01
15	2.9023E 01	7.7862E 00	7.0552E 00	6.9123E 00	6.7544E 00	6.7214E 00
16	2.2603E 01	1.2588E 01	1.2529E 01	1.2502E 01	1.2442E 01	1.2348E 01
17	1.7603E 01	1.1064E 01	1.0552E 01	1.0442E 01	1.0334E 01	1.0427E 01
18	1.3710E 01	9.0792E 00	9.0829E 00	9.0853E 00	9.0924E 00	9.1117E 00
19	1.0677E 01	1.0871E 01	1.0871E 01	1.0871E 01	1.0871E 01	1.0871E 01
20	8.3153E 00	1.2098E 01	1.2086E 01	1.2083E 01	1.2066E 01	1.2044E 01
21	6.4760E 00	1.5301E 01	1.4895E 01	1.4784E 01	1.4613E 01	1.4430E 01
22	5.0435E 00	7.7091E 00	7.8855E 00	7.9412E 00	8.0339E 00	8.1342E 00
23	3.9279E 00	9.4475E 00	9.4541E 00	9.4574E 00	9.4654E 00	9.4809E 00
24	3.0590E 00	9.8877E 00	9.8880E 00	9.8882E 00	9.8886E 00	9.8896E 00
25	2.3824E 00	1.0364E 01	1.0364E 01	1.0364E 01	1.0364E 01	1.0367E 01
26	1.8554E 00	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01
27	1.4450E 00	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01
28	1.1254E 00	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01
29	8.7640E-01	1.0856E 01	1.0856E 01	1.0856E 01	1.0856E 01	1.0855E 01
30	6.8260E-01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01
31	5.3160E-01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01
32	4.1400E-01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01

TABLE VI. - Continued. CODE LISTING AND SAMPLE OUTPUT FOR DEPLETED URANIUM CASES

FULLY DENSE DEPLETED URANIUM SLAB IN HYDROGEN

CAPTURE CROSS-SECTIONS, BARNS, MATL U-238

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	7.0351E-01	6.0404E-01	5.8034E-01	5.4701E-01	5.1757E-01
2	7.4852E 02	8.1829E-01	6.9860E-01	6.6959E-01	6.2836E-01	5.9193E-01
3	5.8295E 02	7.5015E-01	6.4369E-01	6.1892E-01	5.8448E-01	5.5476E-01
4	4.5400E 02	7.6245E-01	6.4899E-01	6.2235E-01	5.8490E-01	5.5154E-01
5	3.5358E 02	6.6682E-01	5.5995E-01	5.3557E-01	5.0218E-01	4.7386E-01
6	2.7536E 02	6.4347E-01	5.5584E-01	5.3708E-01	5.0971E-01	4.8520E-01
7	2.1445E 02	7.3474E-01	6.2453E-01	6.0302E-01	5.6731E-01	5.4205E-01
8	1.6702E 02	1.3621E 00	1.2075E 00	1.1595E 00	1.1157E 00	1.0750E 00
9	1.3007E 02	6.6520E-01	5.4226E-01	5.1338E-01	4.7326E-01	4.3679E-01
10	1.0130E 02	2.4831E 00	2.0456E 00	1.9288E 00	1.7439E 00	1.5336E 00
11	7.8893E 01	1.2389E 00	1.0849E 00	1.0495E 00	1.0012E 00	9.6496E-01
12	6.1442E 01	2.2538E 00	1.8309E 00	1.7239E 00	1.5718E 00	1.4496E 00
13	4.7851E 01	7.9603E-02	7.8931E-02	7.8532E-02	7.7389E-02	7.4455E-02
14	3.7266E 01	1.4819E 00	1.2527E 00	1.1822E 00	1.0622E 00	9.1657E-01
15	2.9023E 01	4.5605E 00	3.3839E 00	3.0754E 00	2.6061E 00	2.1503E 00
16	2.2603E 01	6.7411E-01	6.6103E-01	6.5553E-01	6.4442E-01	6.2889E-01
17	1.7603E 01	7.8430E 00	6.1764E 00	5.7505E 00	5.1285E 00	4.5884E 00
18	1.3710E 01	3.7231E-01	3.7084E-01	3.6998E-01	3.6756E-01	3.6144E-01
19	1.0677E 01	1.7479E-01	1.7478E-01	1.7478E-01	1.7479E-01	1.7485E-01
20	8.3153E 00	6.4598E-01	6.3570E-01	6.3053E-01	6.1933E-01	5.9975E-01
21	6.4760E 00	1.2307E 01	9.3441E 00	8.6274E 00	7.5927E 00	6.6011E 00
22	5.0435E 00	6.9897E 00	5.9702E 00	5.6832E 00	5.2413E 00	4.8077E 00
23	3.9279E 00	1.1580E 00	1.1494E 00	1.1450E 00	1.1345E 00	1.1141E 00
24	3.0590E 00	6.5341E-01	6.5316E-01	6.5302E-01	6.5265E-01	6.5179E-01
25	2.3824E 00	5.1620E-01	5.1615E-01	5.1613E-01	5.1604E-01	5.1583E-01
26	1.8554E 00	4.6919E-01	4.6919E-01	4.6919E-01	4.6918E-01	4.6917E-01
27	1.4450E 00	4.6005E-01	4.6005E-01	4.6005E-01	4.6005E-01	4.6006E-01
28	1.1254E 00	4.7107E-01	4.7103E-01	4.7102E-01	4.7098E-01	4.7089E-01
29	8.7640E-01	4.9843E-01	4.9851E-01	4.9855E-01	4.9865E-01	4.9883E-01
30	6.8260E-01	5.3615E-01	5.3614E-01	5.3613E-01	5.3612E-01	5.3611E-01
31	5.3160E-01	5.8429E-01	5.8424E-01	5.8421E-01	5.8415E-01	5.8401E-01
32	4.1400E-01	6.4293E-01	6.4283E-01	6.4278E-01	6.4265E-01	6.4235E-01

FULLY DENSE DEPLETED URANIUM SLAB IN HYDROGEN

SCATTER CROSS-SECTIONS, BARNS, MATL U-238

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.2186E 01	1.1697E 01	1.1556E 01	1.1324E 01	1.1047E 01
2	7.4852E 02	1.1216E 01	1.0849E 01	1.0743E 01	1.0584E 01	1.0389E 01
3	5.8295E 02	1.1795E 01	1.1476E 01	1.1387E 01	1.1241E 01	1.1075E 01
4	4.5400E 02	1.1081E 01	1.0924E 01	1.0884E 01	1.0823E 01	1.0763E 01
5	3.5358E 02	1.1487E 01	1.1433E 01	1.1421E 01	1.1404E 01	1.1389E 01
6	2.7536E 02	1.1250E 01	1.1023E 01	1.0959E 01	1.0852E 01	1.0724E 01
7	2.1445E 02	1.1456E 01	1.1292E 01	1.1252E 01	1.1192E 01	1.1129E 01
8	1.6702E 02	1.3045E 01	1.1997E 01	1.1791E 01	1.1222E 01	1.0704E 01
9	1.3007E 02	1.0925E 01	1.0921E 01	1.0922E 01	1.0925E 01	1.0935E 01
10	1.0130E 02	1.7555E 01	1.6650E 01	1.6412E 01	1.6028E 01	1.5558E 01
11	7.8893E 01	7.8922E 00	7.9126E 00	7.9292E 00	7.9752E 00	8.0790E 00
12	6.1442E 01	1.3384E 01	1.3148E 01	1.3125E 01	1.3155E 01	1.3339E 01
13	4.7851E 01	9.8132E 00	9.8239E 00	9.8303E 00	9.8489E 00	9.8997E 00
14	3.7266E 01	1.8774E 01	1.8037E 01	1.7795E 01	1.7363E 01	1.6807E 01
15	2.9023E 01	7.7772E 00	7.0452E 00	6.9019E 00	6.7444E 00	6.7119E 00
16	2.2603E 01	1.2591E 01	1.2532E 01	1.2504E 01	1.2444E 01	1.2350E 01
17	1.7603E 01	1.1061E 01	1.0548E 01	1.0438E 01	1.0331E 01	1.0424E 01
18	1.3710E 01	9.0752E 00	9.0789E 00	9.0813E 00	9.0884E 00	9.1078E 00
19	1.0677E 01	1.0867E 01	1.0867E 01	1.0867E 01	1.0867E 01	1.0867E 01
20	8.3153E 00	1.2095E 01	1.2083E 01	1.2077E 01	1.2063E 01	1.2041E 01
21	6.4760E 00	1.5315E 01	1.4909E 01	1.4797E 01	1.4623E 01	1.4443E 01
22	5.0435E 00	7.7044E 00	7.8811E 00	7.9359E 00	8.0297E 00	8.1302E 00
23	3.9279E 00	9.4465E 00	9.4531E 00	9.4554E 00	9.4644E 00	9.4799E 00
24	3.0590E 00	9.8870E 00	9.8873E 00	9.8875E 00	9.8879E 00	9.8889E 00
25	2.3824E 00	1.0365E 01	1.0365E 01	1.0365E 01	1.0365E 01	1.0368E 01
26	1.8554E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
27	1.4450E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
28	1.1254E 00	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
29	8.7640E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
30	6.8260E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
31	5.3160E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01
32	4.1400E-01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01	1.0858E 01

TABLE VI. - Concluded. CODE LISTING AND SAMPLE OUTPUT FOR DEPLETED URANIUM CASES

FULLY DENSE DEPLETED URANIUM SLAB IN LITHIUM HYDRIDE

CAPTURE CROSS SECTION, BARNS, DEPLETED URANIUM

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	7.0213E-01	6.0284E-01	5.7917E-01	5.4593E-01	5.1647E-01
2	7.4852E 02	9.1663E-01	6.9717E-01	6.6822E-01	6.2707E-01	5.9372E-01
3	5.8295E 02	7.4836E-01	5.4218E-01	6.1748E-01	5.8313E-01	5.5347E-01
4	4.5400E 02	7.6058E-01	6.4738E-01	6.2033E-01	5.8343E-01	5.5014E-01
5	3.5358E 02	6.6575E-01	5.5904E-01	5.3459E-01	5.0136E-01	4.7308E-01
6	2.7536E 02	6.4232E-01	5.5592E-01	5.3520E-01	5.0891E-01	4.8445E-01
7	2.1445E 02	7.3496E-01	6.2438E-01	5.9987E-01	5.6718E-01	5.4195E-01
8	1.6702E 02	1.3624E 00	1.2080E 00	1.1731E 00	1.1163E 00	1.0759E 00
9	1.3007E 02	6.8056E-01	5.5774E-01	5.2897E-01	4.8917E-01	4.5335E-01
10	1.0130E 02	2.4819E 00	2.0471E 00	1.9309E 00	1.7468E 00	1.5368E 00
11	7.8893E 01	1.2652E 00	1.1134E 00	1.0786E 00	1.0312E 00	9.9593E-01
12	6.1442E 01	2.2672E 00	1.8460E 00	1.7420E 00	1.5916E 00	1.4709E 00
13	4.7851E 01	1.3426E-01	1.3355E-01	1.3318E-01	1.3215E-01	1.2955E-01
14	3.7266E 01	1.5175E 00	1.2914E 00	1.2217E 00	1.1027E 00	9.5794E-01
15	2.9023E 01	4.7179E 00	3.5239E 00	3.2102E 00	2.7318E 00	2.2654E 00
16	2.2603E 01	7.4735E-01	7.3329E-01	7.2735E-01	7.1538E-01	6.9858E-01
17	1.7603E 01	8.0021E 00	6.3236E 00	5.8439E 00	5.2653E 00	4.7169E 00
18	1.3710E 01	4.3876E-01	4.3732E-01	4.3553E-01	4.3423E-01	4.2853E-01
19	1.0677E 01	3.7865E-01	3.7485E-01	3.7352E-01	3.7121E-01	3.6888E-01
20	8.3153E 00	8.0315E-01	7.8495E-01	7.7559E-01	7.5875E-01	7.3058E-01
21	6.4760E 00	1.2023E 01	9.1410E 00	8.4429E 00	7.4342E 00	6.4552E 00
22	5.0435E 00	7.1597E 00	6.1077E 00	5.8120E 00	5.3576E 00	4.9124E 00
23	3.9279E 00	1.2666E 00	1.2555E 00	1.2500E 00	1.2366E 00	1.2104E 00
24	3.0590E 00	7.1314E-01	7.1264E-01	7.1240E-01	7.1182E-01	7.1063E-01
25	2.3824E 00	5.2561E-01	5.2556E-01	5.2552E-01	5.2541E-01	5.2509E-01
26	1.8554E 00	5.1010E-01	5.0999E-01	5.0993E-01	5.0985E-01	5.0974E-01
27	1.4450E 00	4.6356E-01	4.6355E-01	4.6355E-01	4.6356E-01	4.6355E-01
28	1.1254E 00	4.9915E-01	4.9900E-01	4.9894E-01	4.9875E-01	4.9839E-01
29	8.7640E-01	5.3285E-01	5.3277E-01	5.3273E-01	5.3265E-01	5.3250E-01
30	6.8260E-01	5.4039E-01	5.4038E-01	5.4033E-01	5.4037E-01	5.4037E-01
31	5.3160E-01	5.8704E-01	5.8699E-01	5.8597E-01	5.8691E-01	5.8675E-01
32	4.1400E-01	6.5013E-01	6.5003E-01	6.4997E-01	6.4983E-01	6.4949E-01

FULLY DENSE DEPLETED URANIUM SLAB IN LITHIUM HYDRIDE

SCATTER CROSS SECTION, BARNS, DEPLETED URANIUM

I	LOW ENERGY	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	9.6112E 02	1.2182E 01	1.1693E 01	1.1554E 01	1.1322E 01	1.1045E 01
2	7.4852E 02	1.1216E 01	1.0847E 01	1.0748E 01	1.0583E 01	1.0388E 01
3	5.8295E 02	1.1791E 01	1.1474E 01	1.1385E 01	1.1240E 01	1.1075E 01
4	4.5400E 02	1.1080E 01	1.0923E 01	1.0833E 01	1.0822E 01	1.0763E 01
5	3.5358E 02	1.1484E 01	1.1430E 01	1.1418E 01	1.1401E 01	1.1385E 01
6	2.7536E 02	1.1247E 01	1.1020E 01	1.0955E 01	1.0849E 01	1.0720E 01
7	2.1445E 02	1.1452E 01	1.1288E 01	1.1247E 01	1.1183E 01	1.1125E 01
8	1.6702E 02	1.3057E 01	1.2011E 01	1.1715E 01	1.1237E 01	1.0723E 01
9	1.3007E 02	1.0926E 01	1.0921E 01	1.0922E 01	1.0926E 01	1.0935E 01
10	1.0130E 02	1.7511E 01	1.6613E 01	1.6375E 01	1.5995E 01	1.5527E 01
11	7.8893E 01	7.8828E 00	7.9036E 00	7.9203E 00	7.9666E 00	8.0710E 00
12	6.1442E 01	1.3390E 01	1.3155E 01	1.3133E 01	1.3164E 01	1.3348E 01
13	4.7851E 01	9.8105E 00	9.8213E 00	9.8277E 00	9.8465E 00	9.8978E 00
14	3.7266E 01	1.8697E 01	1.7969E 01	1.7731E 01	1.7304E 01	1.6753E 01
15	2.9023E 01	7.8229E 00	7.0782E 00	6.9319E 00	6.7705E 00	6.7361E 00
16	2.2603E 01	1.2561E 01	1.2503E 01	1.2476E 01	1.2416E 01	1.2323E 01
17	1.7603E 01	1.1150E 01	1.0634E 01	1.0523E 01	1.0418E 01	1.0517E 01
18	1.3710E 01	9.0730E 00	9.0768E 00	9.0792E 00	9.0865E 00	9.1062E 00
19	1.0677E 01	1.0871E 01	1.0871E 01	1.0871E 01	1.0871E 01	1.0871E 01
20	8.3153E 00	1.2092E 01	1.2080E 01	1.2074E 01	1.2061E 01	1.2038E 01
21	6.4760E 00	1.5263E 01	1.4863E 01	1.4753E 01	1.4582E 01	1.4404E 01
22	5.0435E 00	7.6831E 00	7.8624E 00	7.9191E 00	8.0132E 00	8.1149E 00
23	3.9279E 00	9.4401E 00	9.4467E 00	9.4530E 00	9.4580E 00	9.4737E 00
24	3.0590E 00	9.8857E 00	9.8860E 00	9.8852E 00	9.8866E 00	9.8877E 00
25	2.3824E 00	1.0354E 01	1.0354E 01	1.0354E 01	1.0355E 01	1.0358E 01
26	1.8554E 00	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01
27	1.4450E 00	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01
28	1.1254E 00	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01
29	8.7640E-01	1.0856E 01	1.0856E 01	1.0855E 01	1.0856E 01	1.0855E 01
30	6.8260E-01	1.0856E 01	1.0855E 01	1.0856E 01	1.0856E 01	1.0855E 01
31	5.3160E-01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01
32	4.1400E-01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01

BROAD GROUP AVERAGED CAPTURE/SCATTER CROSS SECTION

BG NO.	CONTAINS GROUPS	CASE 1 1 CM	CASE 2 2 CM	CASE 3 2.54CM	CASE 4 4 CM	CASE 5 8 CM
1	1 TO 3	7.5561E-01	5.4732E-01	5.2155E-01	5.8527E-01	5.5339E-01
		1.1731E 01	1.1339E 01	1.1229E 01	1.1049E 01	1.0837E 01
2	4 TO 10	1.0082E 00	8.4502E-01	8.0429E-01	7.4393E-01	6.8491E-01
		1.2261E 01	1.1885E 01	1.1783E 01	1.1519E 01	1.1442E 01
3	11 TO 15	1.8184E 00	1.4329E 00	1.3301E 00	1.1711E 00	1.0059E 00
		1.1498E 01	1.1201E 01	1.1139E 01	1.1079E 01	1.1132E 01
4	16 TO 19	1.8875E 00	1.4481E 00	1.3305E 00	1.1474E 00	9.5410E-01
		1.0917E 01	1.0801E 01	1.0774E 01	1.0740E 01	1.0731E 01
5	20 TO 24	3.5068E 00	2.6953E 00	2.4795E 00	2.1412E 00	1.7750E 00
		1.0785E 01	1.0754E 01	1.0749E 01	1.0749E 01	1.0775E 01
6	25 TO 28	5.0120E-01	5.0105E-01	5.0098E-01	5.0080E-01	5.0036E-01
		1.0712E 01	1.0712E 01	1.0713E 01	1.0714E 01	1.0717E 01
7	29 TO 32	5.7021E-01	5.7008E-01	5.7002E-01	5.6986E-01	5.6950E-01
		1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01	1.0857E 01

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